SAMSUNG

User Manual

MD32B
MD40B
MD46B
MD55B

The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

BN46-00237C-00

Table Of Contents

BEFORE USING THE PRODUCT

10 **Copyright**

11 **Cleaning**

11 Storage

12 **Safety Precautions**

12 Symbols

13 Electricity and Safety

14 Installation

16 Operation

PREPARATIONS

20 **Checking the Contents**

20 Removing the Packaging

21 Checking the Components

23 **Parts**

23 Control Panel

25 Reverse Side

26 Anti-theft Lock

27 Remote Control

30 **Before Installing the Product (Installation Guide)**

30 Tilting Angle and Rotation

31 Ventilation

33 Dimensions

34 **Installing the Wall Mount**

34 Installing the Wall Mount Kit

34 Wall Mount Kit Specifications (VESA)

36 **Remote Control (RS232C)**

36 Cable Connection

39 Connection

41 Control Codes

CONNECTING AND USING A SOURCE DEVICE

52 **Before Connecting**

52 Pre-connection Checkpoints

Table Of Contents

53 **Connecting and Using a PC**
53 Connecting to a PC
55 Changing the Resolution

57 **Connecting to a Video Device**
57 Connection Using an HDMI-DVI Cable
58 Connection Using an HDMI Cable
58 Connecting to an Audio System

59 **Connecting the network box(Sold separately)**
59 **MagicInfo**

63 **Changing the Input source**
63 **Source**

USING MDC

64 **Configuring Settings for Multi Control**
64 Configuring settings for **Multi Control**

65 **MDC Program Installation/Uninstallation**
65 Installation
65 Uninstallation

66 **What is MDC?**
66 Connecting to MDC
68 Connection Management
69 **Auto Set ID**
70 Cloning
71 Command Retry
72 Getting Started with MDC
74 Main Screen Layout
75 Menus
77 Screen Adjustment
80 Sound Adjustment
81 System Setup
89 Tool Settings
91 Other Functions
96 Troubleshooting Guide

Table Of Contents

SCREEN ADJUSTMENT

98 Picture Mode
98 If the input source is **PC** or **DVI**
98 If the input source is **HDMI**
99 Backlight / Contrast / Brightness / Sharpness / Color / Tint(G/R)
99 Screen Adjustment
100 Picture Size
101 Position
101 PC Screen Adjustment
101 Resolution Select
102 Auto Adjustment
102 Advanced Settings
102 Black Tone
103 Dynamic Contrast
103 Shadow Detail
103 Gamma
103 Expert Pattern
103 RGB Only Mode
103 Color Space
104 White Balance
104 10p White Balance (Off / On)
104 Flesh Tone
104 Edge Enhancement (Off / On)
104 Motion Lighting (Off / On)
104 LED Motion Plus (Off / On)
105 Picture Options
105 Color Tone
105 Color Temp.
105 Digital Noise Filter
106 MPEG Noise Filter
106 HDMI Black Level
106 Film Mode
106 Reset Picture

Table Of Contents

SOUND ADJUSTMENT

107 **Sound Mode**

108 **Sound Effect**

109 **Speaker Settings**

109 **Reset Sound**

MEDIA

110 **MagicInfo Lite**

111 **Videos**

111 Playing a Video

114 **Photos**

114 Viewing a Photo (or **Slide Show**)

115 **Music**

115 Playing Music

116 **Videos / Photos / Music - Additional Functions**

116 Sorting the file lists

117 **Videos**/**Photos**/**Music** Play Option menu

119 **Source**

119 **Source**

119 **Edit Name**

120 **Information**

120 **Refresh**

NETWORK

121 **Network Settings**

121 Connecting to a Wired Network

122 Wired Network Settings

124 Connecting to a Wireless Network

125 Wireless Network Setting

127 **WPS(PBC)**

127 **One Foot Connection**

128 Ad Hoc Network Setup

129 **Network Status**

130 **MagicInfo Lite Settings**

Table Of Contents

SYSTEM

131 Multi Control
131 Configuring settings for **Multi Control**
132 Time
132 Clock set
132 Sleep Timer
132 On Timer
133 Off Timer
133 Holiday Management
134 Menu Language
135 Eco Solution
135 Energy Saving
135 Eco Sensor (Off / On)
136 No Signal Power Off
136 Auto Power Off (Off / On)
136 Security
136 Safety Lock (Off / On)
137 Button Lock (Off / On)
137 Change PIN
138 Auto Protection Time
138 Screen Burn Protection
138 Pixel Shift
139 Timer
139 Pixel
139 Side Gray
140 Video Wall
140 Video Wall
140 Format
141 Horizontal
141 Vertical
141 Screen Position
142 Source AutoSwitch Settings

Table Of Contents

143 General
143 Max. Power Saving
143 Game Mode
144 BD Wise
144 Auto Power
144 Standby Control
144 Lamp Schedule
144 OSD Display
145 Power On Adjustment
145 Temperature Control
145 Device Name

146 Anynet+(HDMI-CEC)
146 Anynet+(HDMI-CEC)
147 Auto Turn Off (No / Yes)
148 Receiver

149 DivX® Video On Demand

149 Network Remote Control

150 Reset System

150 Reset All

SUPPORT

151 Software Upgrade
151 By USB
151 Alternative Software

152 Contact Samsung

MAGICINFO LITE

153 File Formats Compatible with MagicInfo Lite Player
153 Video / Audio

157 Network Schedule
157 Connecting to a server
158 MagicInfo Lite Settings
158 Approving a connected device from the server
162 Setting the current time

Table Of Contents

163 Local Schedule

163 Local Schedule Manager

163 Registering a **Local Schedule**

166 Modifying a **Local Schedule**

167 Deleting a **Local Schedule**

169 Running a **Local Schedule**

170 Stopping a **Local Schedule**

171 Viewing the details of a **Local Schedule**

172 Contents Manager

172 Copying content

173 Deleting content

174 Internal AutoPlay

174 Running **Internal AutoPlay**

174 USB AutoPlay

174 Running Internal AutoPlay

175 When Content is Running

175 Viewing the details of the content that is running

176 Changing the settings for the content that is running

TROUBLESHOOTING GUIDE

177 Requirements Before Contacting Samsung Customer Service Center

177 Testing the Product

177 Checking the Resolution and Frequency

178 Check the followings.

181 Q & A

SPECIFICATIONS

183 General

184 PowerSaver

185 Preset Timing Modes

187 License

Table Of Contents

APPENDIX

188 Contact SAMSUNG WORLDWIDE

189 Responsibility for the Pay Service (Cost to Customers)

189 Not a product defect

189 A Product damage caused by customer's fault

189 Others

190 Optimum Picture Quality and Afterimage Burn-in Prevention

190 Optimum Picture Quality

191 Prevention of Afterimage Burn-in

193 Terminology

INDEX

Copyright

The contents of this manual are subject to change without notice to improve quality.

© 2012 Samsung Electronics

Samsung Electronics owns the copyright for this manual.

Use or reproduction of this manual in parts or entirety without the authorization of Samsung Electronics is prohibited.

The SAMSUNG and SyncMaster logos are registered trademarks of Samsung Electronics.

Microsoft and Windows are registered trademarks of Microsoft Corporation.

VESA, DPM and DDC are registered trademarks of the Video Electronics Standards Association.

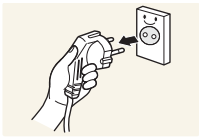
Ownership of all other trademarks is attributed to their due owner.

Cleaning

Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.

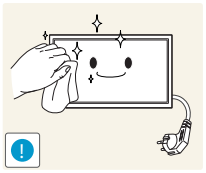
Take the following steps when cleaning.

The following images are for reference only. Real-life situations may differ from what is shown in the images.

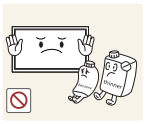


1. Power off the product and computer.
2. Disconnect the power cord from the product.

   Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.

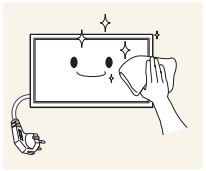


3. Wipe the product with a clean, soft and dry cloth.

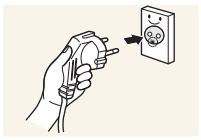


- Do not use detergents that contain alcohol, solvent or surface-active agents.

- Do not spray water or detergent directly on the product.



4. Wet a soft and dry cloth in water and wring thoroughly to clean the exterior of the product.



5. Connect the power cord to the product when cleaning is finished.
6. Power on the product and computer.

Storage

High-glossy models can develop white stains on the surface if an ultrasonic wave humidifier is used nearby.

Contact Customer Service Center if the inside of the product needs cleaning (service fee will be charged).

Safety Precautions

Caution
RISK OF ELECTRIC SHOCK DO NOT OPEN
Caution : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

	This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any internal part of this product.
	This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

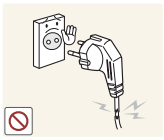
Symbols

Warning	A serious or fatal injury may result if instructions are not followed.
Caution	Personal injury or damage to properties may result if instructions are not followed.
	Activities marked by this symbol are prohibited.
	Instructions marked by this symbol must be followed.

Electricity and Safety

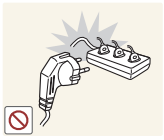
The following images are for reference only. Real-life situations may differ from what is shown in the images.

Warning



Do not use a damaged power cord or plug, or a loose power socket.

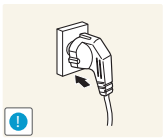
- An electric shock or fire may result.



Do not use multiple products with a single power socket.

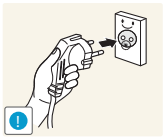
- Overheated power sockets may cause a fire.

Do not touch the power plug with wet hands. Otherwise, an electric shock may result.



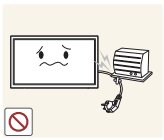
Insert the power plug all the way in so it is not loose.

- An unsecure connection may cause a fire.



Connect the power plug to a grounded power socket (type 1 insulated devices only).

- An electric shock or injury may result.

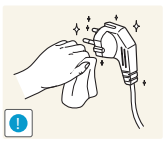


Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.

- Damage to the cord may result in a fire or electric shock.

Do not place the power cord or product near heat sources.

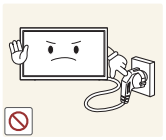
- A fire or electric shock may result.



Clean any dust around the pins of the power plug or the power socket with a dry cloth.

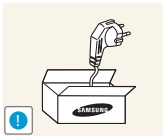
- A fire may result.

Caution



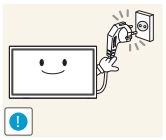
Do not disconnect the power cord while the product is being used.

- The product may become damaged by an electric shock.



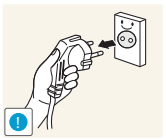
Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.

- A fire or electric shock may result.



Keep the power socket where the power cord is connected unobstructed.

- The power cord must be disconnected to cut off power to the product when an issue occurs.
- Note that the product is not completely powered down by using only the power button on the remote.



Hold the plug when disconnecting the power cord from the power socket.

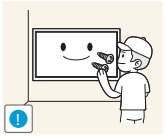
- An electric shock or fire may result.

Installation

Warning

DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.

- A fire may result.

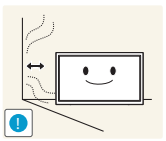


Have a technician install the wall-mount hanger.

- Installation by an unqualified person can result in an injury.
- Only use approved cabinets.

Do not install the product in poorly ventilated spaces such as a bookcase or closet.

- An increased internal temperature may cause a fire.



Install the product at least 10cm away from the wall to allow ventilation.

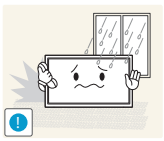
- An increased internal temperature may cause a fire.

Keep the plastic packaging out of the reach of children.

- Children may suffocate.

Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)

- The product may fall and become damaged and/or cause an injury.
- Using the product in an area with excess vibration may damage the product or cause a fire.

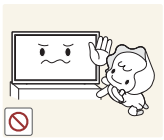


Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

- A fire or electric shock may result.

Do not expose the product to direct sunlight, heat, or a hot object such as a stove.

- The product lifespan may be reduced or a fire may result.



Do not install the product within the reach of young children.

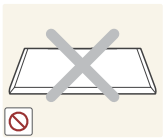
- The product may fall and injure children.
- As the front is heavy, install the product on a flat and stable surface.

Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution

Do not drop the product while moving.

- Product failure or personal injury may result.

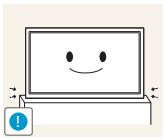


Do not set down the product on its front.

- The screen may become damaged.

When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.

- The product may fall and become damaged and/or cause an injury.
- Install the product only on cabinets or shelves of the right size.



Set down the product gently

- Product failure or personal injury may result.

Installing the product in an unusual place (a place exposed to a lot of fine particles, chemical substances or extreme temperatures, or an airport or train station where the product should operate continuously for an extended period of time) may seriously affect its performance.

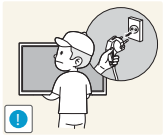
- Be sure to consult Samsung Customer Service Center if you want to install the product at such a place.

Operation

Warning

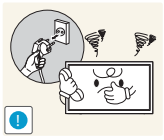
There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

- A fire or electric shock may result.
- Contact Samsung Customer Service Center for repairs.



Before moving the product, turn off the power switch and disconnect the power cable and all other connected cables.

- Damage to the cord may result in a fire or electric shock.



If the product generates abnormal sounds, a burning smell or smoke, disconnect the power cord immediately and contact Samsung Customer Service Center.

- An electric shock or fire may result.

Do not let children hang from the product or climb on top of it.

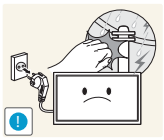
- Children may become injured or seriously harmed.

If the product is dropped or the outer case is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Center.

- Continued use can result in a fire or electric shock.

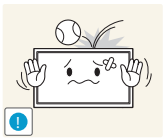
Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

- The product or heavy objects may fall as children try to reach for the toys or sweets resulting in a serious injury.



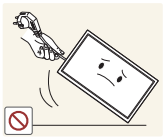
During a lightning or thunderstorm, power off the product and remove the power cable.

- A fire or electric shock may result.



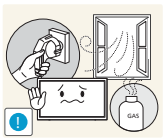
Do not drop objects on the product or apply impact.

- A fire or electric shock may result.



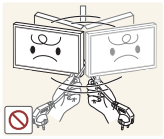
Do not move the product by pulling the power cord or any cable.

- Product failure, an electric shock or fire may result from a damaged cable.



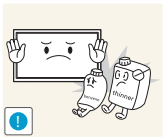
If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.



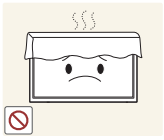
Do not lift or move the product by pulling the power cord or any cable.

- Product failure, an electric shock or fire may result from a damaged cable.



Do not use or keep combustible spray or an inflammable substance near the product.

- An explosion or fire may result.



Ensure the vents are not blocked by tablecloths or curtains.

- An increased internal temperature may cause a fire.

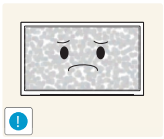
Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).

- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.

Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

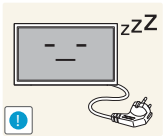
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.

Caution



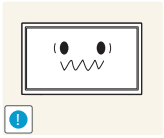
Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

- Activate power-saving mode or a moving-picture screen saver if you will not be using the product for an extended period of time.



Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).

- Dust accumulation combined with heat can cause a fire, electric shock or electric leakage.

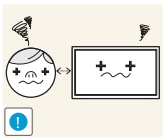


Use the product at the recommended resolution and frequency.

- Your eyesight may deteriorate.

Do not hold the product upside-down or move it by holding the stand.

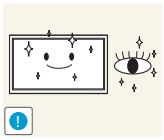
- The product may fall and become damaged or cause an injury.



Looking at the screen too close for an extended period of time can deteriorate your eyesight.

Do not use humidifiers or stoves around the product.

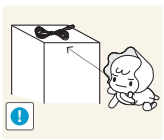
- A fire or electric shock may result.



Rest your eyes for more than 5 minutes for every 1 hour of product use.

- Eye fatigue will be relieved.

Do not touch the screen when the product has been turned on for an extended period of time as it will become hot.



Store small accessories out of the reach of children.

Exercise caution when adjusting the product angle or stand height.

- Your hand or finger may get stuck and injured.
- Tilting the product at an excessive angle may cause the product to fall and an injury may result.

Do not place heavy objects on the product.

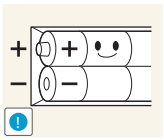
- Product failure or personal injury may result.

When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.

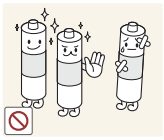
Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



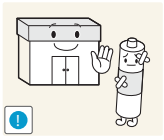
When replacing the battery, insert it with the right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.



Use only the specified standardized batteries, and do not use a new battery and a used battery at the same time.

- Otherwise, the batteries may be damaged or cause fire, personal injury or damage due to a leakage of the internal liquid.



The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

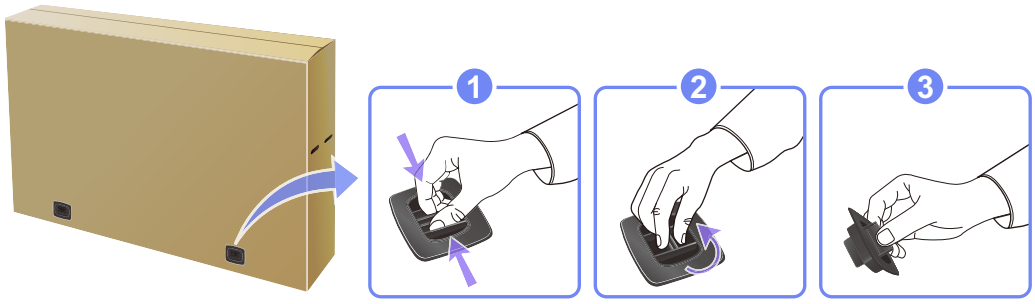
- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

1 Preparations

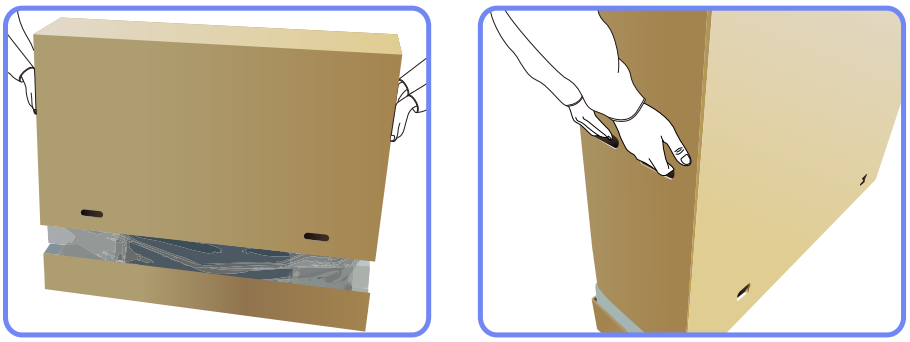
1.1 Checking the Contents

1.1.1 Removing the Packaging

1 Remove the black locking device at the bottom of the box.

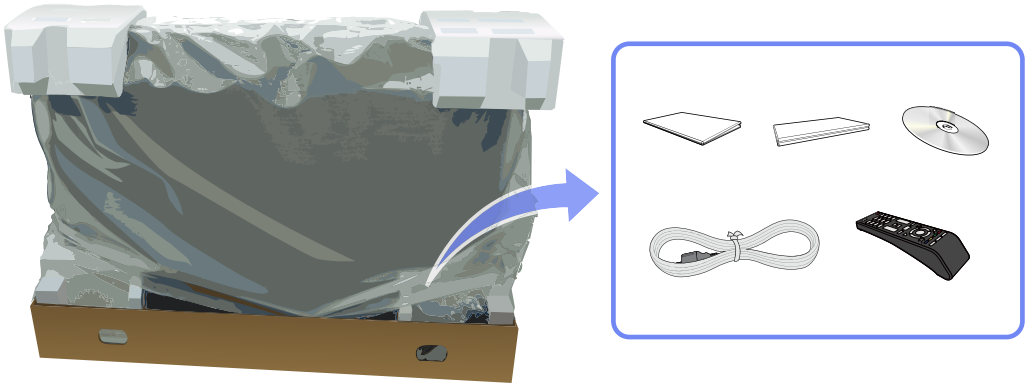


2 Using the grooves in the box, lift and remove the top of the box.



3 Check the components and remove the styrofoam and plastic bag.

The appearance of actual components may differ from the image shown.



This image is for reference only.

4 Store the box in a dry area so that it can be used when moving the product in the future.

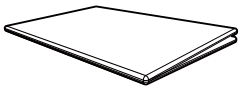
1.1.2 Checking the Components

- Contact the vendor where you purchased the product if any components are missing.
- The appearance of the components and items sold separately may differ from the image shown.
- The stand is not supplied.

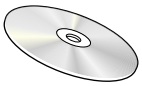
Components

Components may differ in different locations.

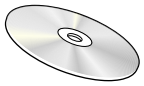
Quick setup guide



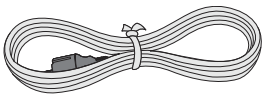
Warranty card
(Not available in some locations)



User manual

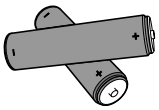


MagicInfo Lite Edition
Software CD

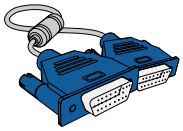


Power cord

Remote Control



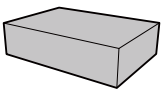
Batteries
(Not available in some locations)



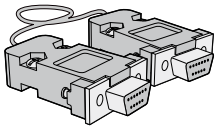
D-SUB cable

Items sold separately

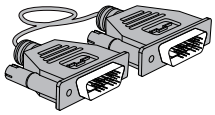
The following items can be purchased at your nearest retailer.



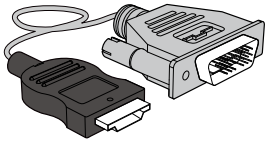
Wall-mount KIT



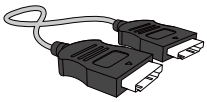
RS232C cable



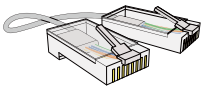
DVI cable



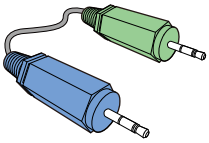
HDMI-DVI Cable



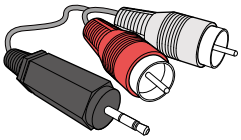
HDMI cable



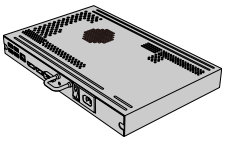
LAN cable



Stereo cable



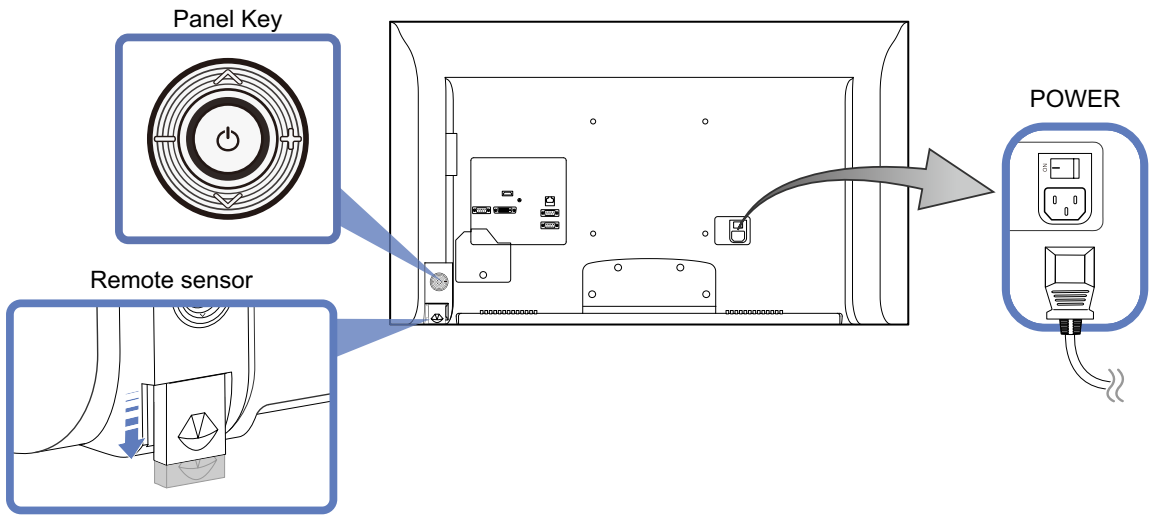
RCA stereo cable



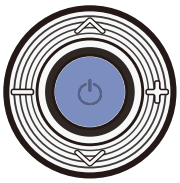
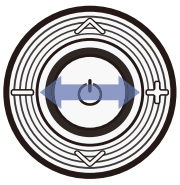
Network box

1.2 Parts

1.2.1 Control Panel



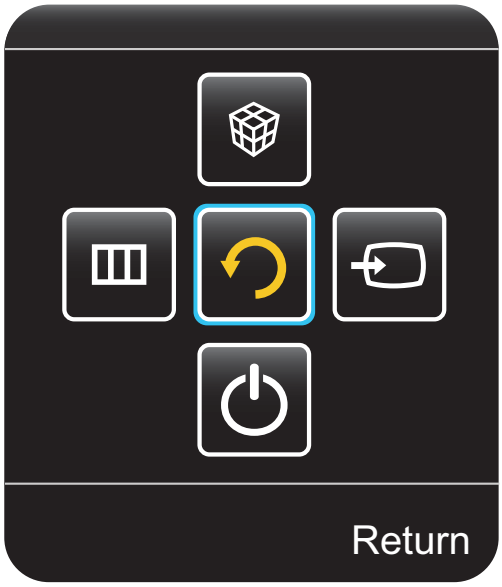
Panel Key

Sensor	Description
	Power on the product. If you press the [⏻] button when the product is turned on, the control menu will be displayed. To exit the OSD menu, press and hold the panel key for at least one second.
	Move to the upper or lower menu. You can also adjust the value of an option.
	Move to the left or right menu. You can adjust the volume by moving the panel key left or right when the control menu is not displayed.
Remote sensor	To control the remote control in front of the product, lower the remote control sensor in the direction of the arrow.

The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

Control menu

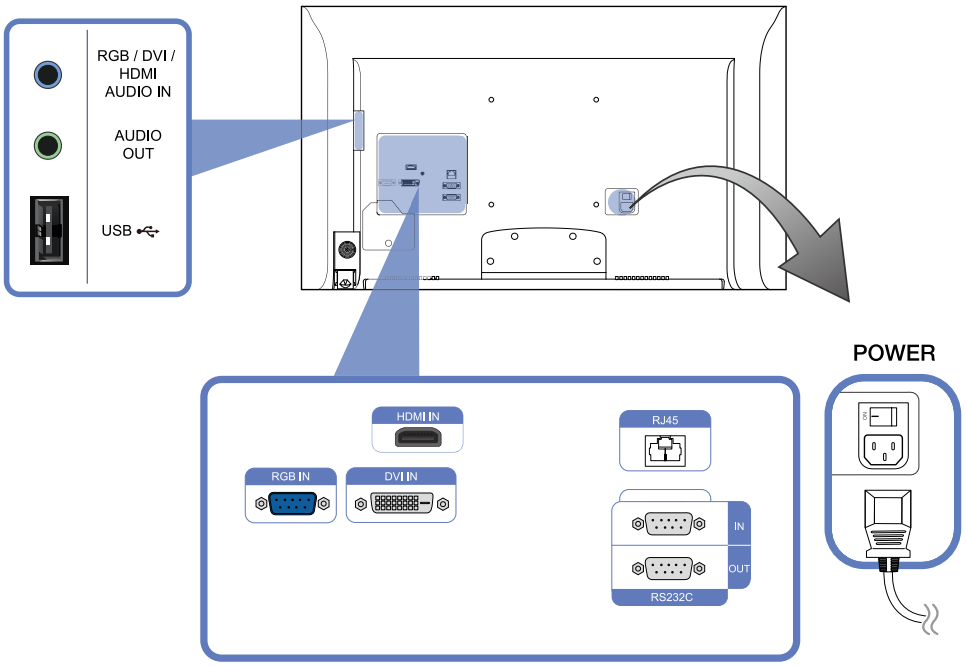
If you press the [⏻] button on the panel key ("1.2 Parts") when the product is turned on, the control menu will be displayed.



Icons	Description
	Select the connected input source. Move the panel key right to select **Source** [ ] in the control menu. When the list of input sources is displayed, move the panel key up or down to select the desired input source. Next, press the panel key.
	Display the OSD menu. Move the panel key left to select menu [ ] in the control menu. The OSD control screen will appear. Move the panel key right to select the desired menu. You can select a sub-menu item by moving the panel key up, down, left, or right. To change settings, select the desired menu and press the panel key.
	Enter MagicInfo Lite mode. Move the panel key up to select **MagicInfo Lite** [ ] in the control menu.
	Power off the product. Move the panel key down to select **Power off** [ ] in the control menu. Next, press the panel key.
	Exit the control menu.

1.2.2 Reverse Side

The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

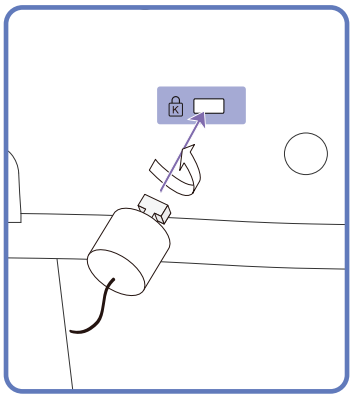


Port	Description
[RGB / DVI / HDMI AUDIO IN]	Receives sound from a PC via an audio cable.
[AUDIO OUT]	Connects to the audio of a source device.
[USB]	USB memory device port.
[HDMI IN]	Connects to a source device using an HDMI cable.
[RGB IN]	Connects to a source device using a D-SUB cable.
[DVI IN]	Connects to a source device using a DVI cable or HDMI-DVI cable.
[RJ45]	Connects to MDC using a LAN cable.
[RS232C IN / OUT]	Connects to MDC using an RS232C cable.

1.2.3 Anti-theft Lock

- An anti-theft lock allows you to use the product securely even in public places.
- The locking device shape and locking method depend on the manufacturer. Refer to the user guide provided with your anti-theft locking device for details.

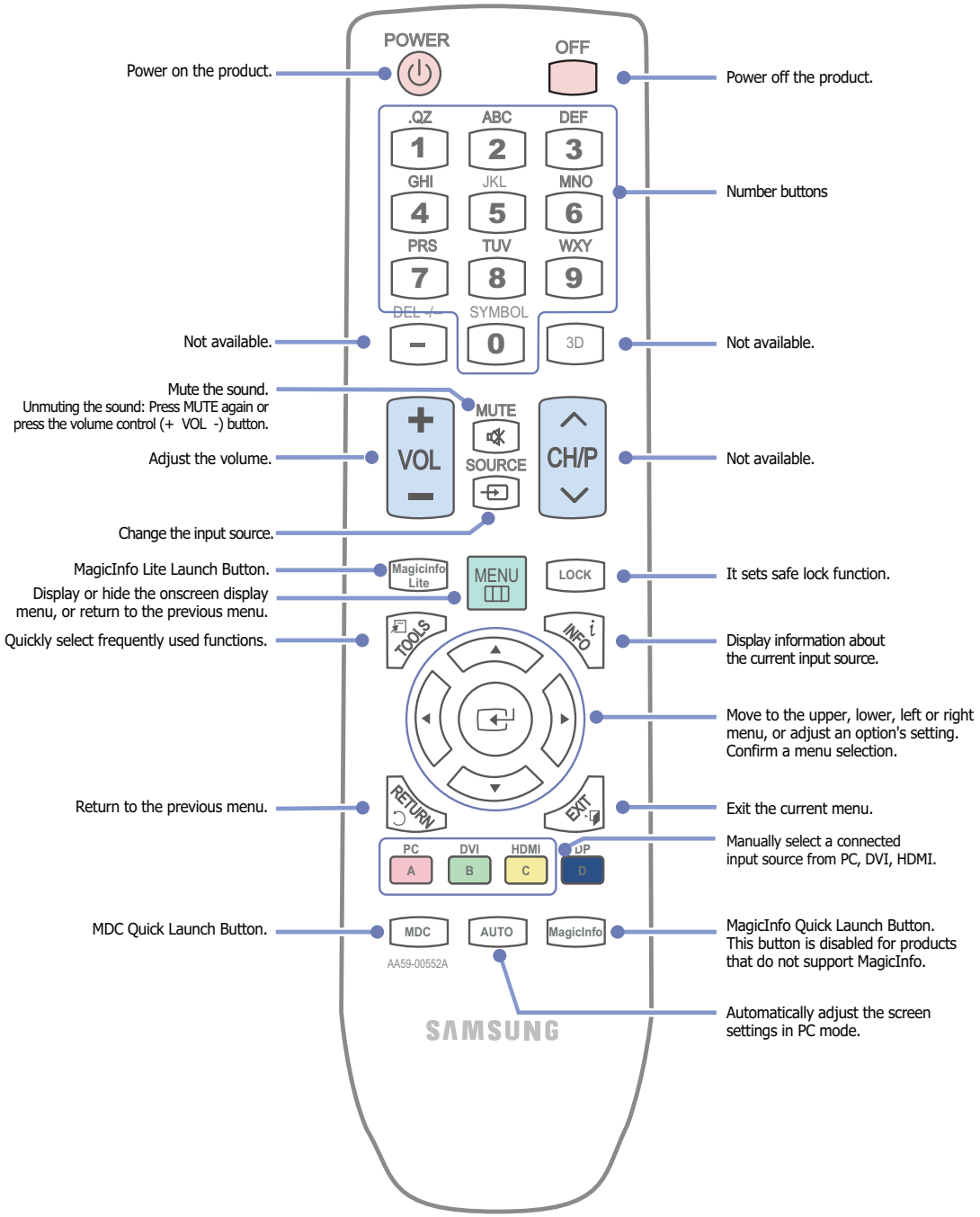
To lock an anti-theft locking device



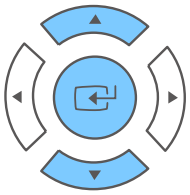
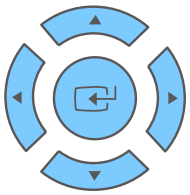
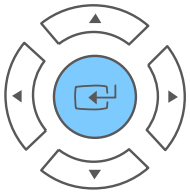
1. Fix the cable of your anti-theft locking device to a heavy object such as a desk.
2. Put one end of the cable through the loop on the other end.
3. Insert the locking device into the anti-theft lock slot at the back of the product.
4. Lock the locking device.
   - An anti-theft locking device can be purchased separately.
   - Refer to the user guide provided with your anti-theft locking device for details.
   - Anti-theft locking devices can be purchased at electronics retailers or online.

1.2.4 Remote Control

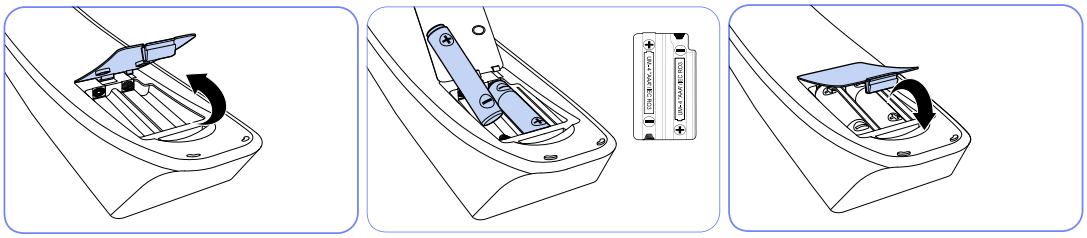
- Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.
- Remote control button functions may differ for different products.



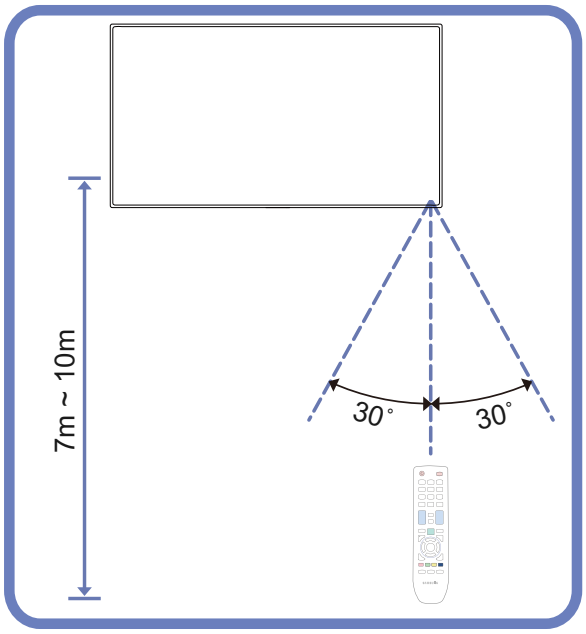
Adjusting the OSD with the Remote Control

	1. Open the OSD menu.
	2. Select from **Picture**, **Sound**, **Media**, **Network**, **System** or **Support** in the displayed OSD menu screen.
	3. Change settings as desired.
	4. Finish setting.
	5. Close the onscreen display (OSD) menu.

To place batteries in the remote control



Remote Control Reception Range



Use the remote control within 7m to 10m from the sensor on the product at an angle of 30° from the left and right.

- Store used batteries out of reach of children and recycle.
- Do not use a new and used battery together. Replace both batteries at the same time.
- Remove batteries when the remote control is not to be used for an extended period of time.

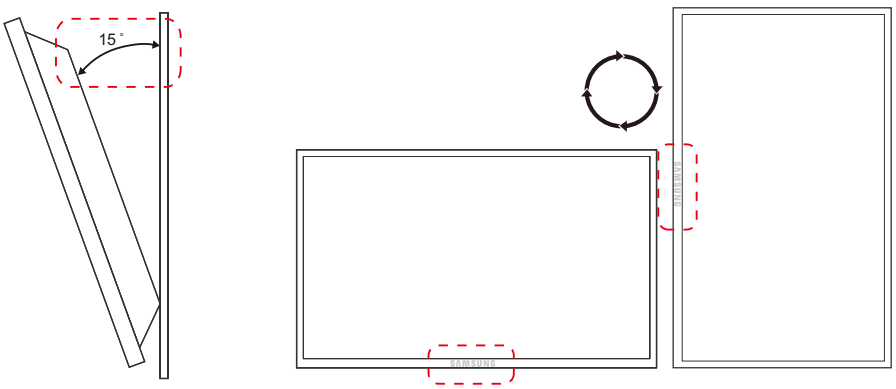
1.3 Before Installing the Product (Installation Guide)

To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

- Ensure that an authorized installation company installs the wall mount.
- Otherwise, it may fall and cause personal injury.
- Make sure to install the specified wall mount.

1.3.1 Tilting Angle and Rotation

Contact Samsung Customer Service Center for further details.



A The product can be tilted at a maximum angle of 15˚ from a perpendicular wall surface.

B To use the product vertically (portrait), turn it clockwise so that the LED is pointing down.

1.3.2 Ventilation

1. Installation on a Perpendicular Wall

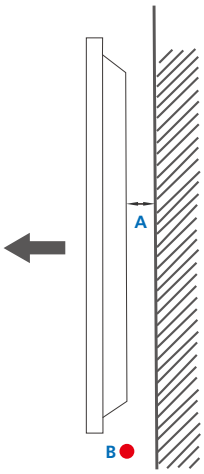


Figure 1.1 Side view

A Minimum 40 mm

B Ambient temperature: Under 35˚C

- When installing the product on a perpendicular wall, allow at least 40mm of space between the product and wall surface for ventilation and ensure that the ambient temperature is kept below 35˚C.

2. Installation on an Indented Wall

Contact Samsung Customer Service Center for further details.

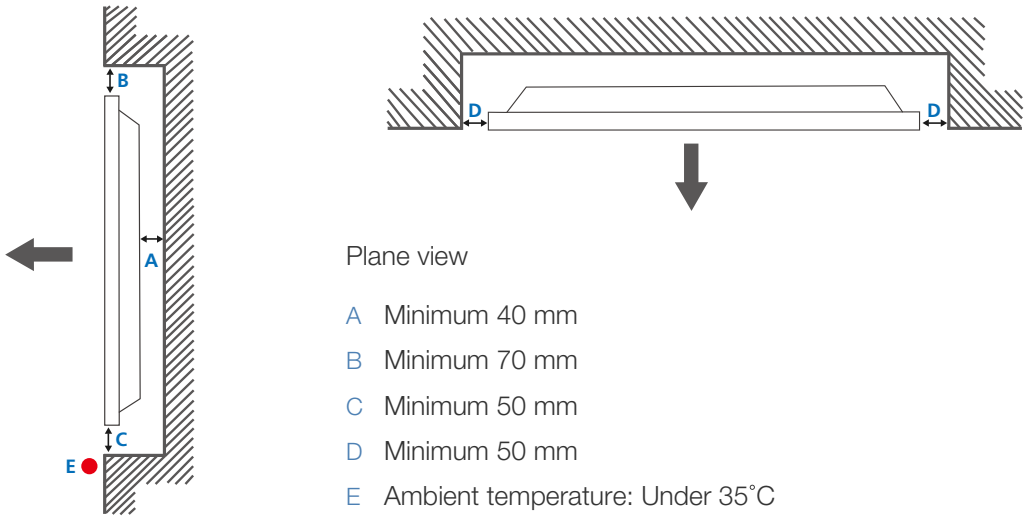


Figure 1.2 Side view

When installing the product on an indented wall, allow at least the space specified above between the product and wall for ventilation and ensure that the ambient temperature is kept below 35˚C.

3. Installation in an Indented Floor

Contact Samsung Customer Service Center for further details.

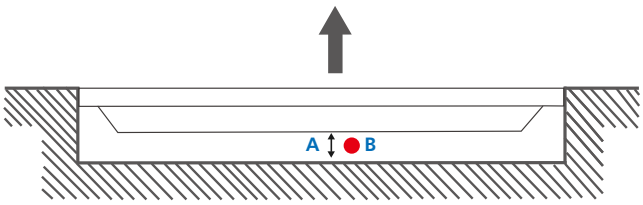
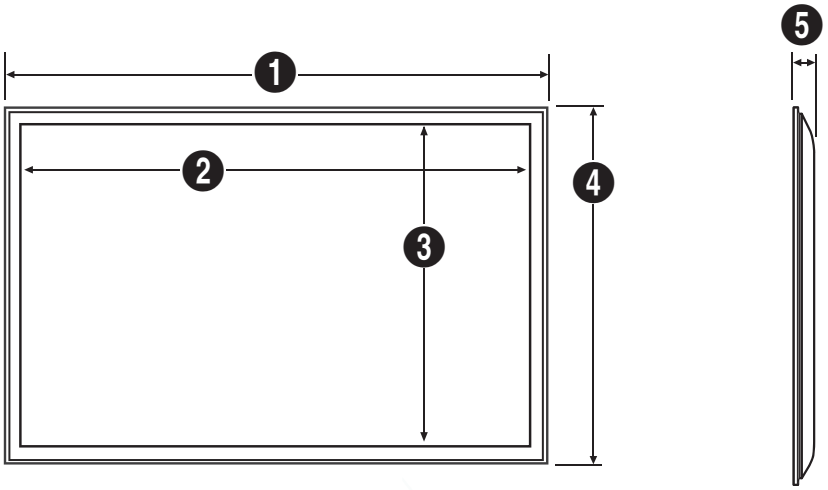


Figure 1.3 Side view

When installing the product in an indented floor, allow at least 50 mm of space between the product and floor surface for ventilation and ensure that the ambient temperature is kept below 20˚C.

1.3.3 Dimensions



Unit: mm(inches)

Model name	1	2	3	4	5
MD32B	736.0 (29.0)	698.4 (27.5)	392.9 (15.5)	434.5 (17.1)	93.5 (3.7)
MD40B	925.4 (36.4)	885.6 (34.9)	498.2 (19.6)	541.0 (21.3)	93.5 (3.7)
MD46B	1057.7 (41.6)	1018.1 (40.1)	572.7 (22.5)	615.8 (24.2)	94.9 (3.7)
MD55B	1247.7 (49.1)	1209.6 (47.6)	680.4 (26.8)	722.9 (28.5)	95.2 (3.7)

All drawings are not necessarily to scale. Some dimensions are subject to change without prior notice. Refer to the dimensions prior to performing installation of your product. Not responsible for typographical or printed errors.

1.4 Installing the Wall Mount

1.4.1 Installing the Wall Mount Kit

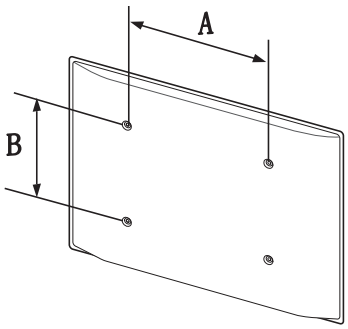
The wall mount kit (sold separately) allows you to mount the product on the wall.

For detailed information on installing the wall mount, see the instructions provided with the wall mount. We recommend you contact a technician for assistance when installing the wall mount bracket. Samsung Electronics is not responsible for any damage to the product or injury to yourself or others if you elect to install the wall mount on your own.

1.4.2 Wall Mount Kit Specifications (VESA)

Install your wall mount on a solid wall perpendicular to the floor. Before attaching the wall mount to surfaces other than plaster board, please contact your nearest dealer for additional information. If you install the product on a ceiling or slanted wall, it may fall and result in severe personal injury.

- Standard dimensions for wall mount kits are shown in the table below.
- Samsung wall mount kits contain a detailed installation manual and all parts necessary for assembly are provided.
- Do not use screws that do not comply with the VESA standard screw specifications.
- Do not use screws that are longer than the standard length or do not comply with the VESA standard screw specifications. Screws that are too long may cause damage to the inside of the product.
- For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on the wall mount specifications.
- Do not fasten the screws too firmly. This may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.
- Samsung is not liable for product damage or personal injury when a non-VESA or non-specified wall mount is used or the consumer fails to follow the product installation instructions.
- Do not mount the product at more than a 15 degree tilt.
- Always have two people mount the product on a wall.



Model name	VESA screw hole specs (A * B) in millimeters	Standard Screw	Quantity
MD32B MD40B	200 X 200	M6	4
MD46B MD55B	400 X 400	M8	

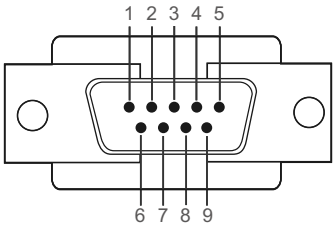
Do not install your Wall Mount Kit while your product is turned on. It may result in personal injury due to electric shock.

1.5 Remote Control (RS232C)

1.5.1 Cable Connection

Interface	RS232C (9 pins)
Pin	TxD (No. 2), RxD (No. 3), GND (No. 5)
Bit rate	9600 bps
Data bits	8 bit
Parity	None
Stop bit	1 bit
Flow control	None
Maximum length	15m (only shielded type)

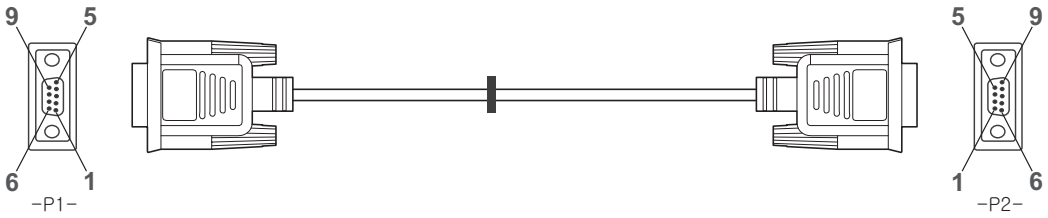
- Pin assignment



Pin	Signal
1	Detect data carrier
2	Received data
3	Transmitted data
4	Prepare data terminal
5	Signal ground
6	Prepare data set
7	Send request
8	Clear to send
9	Ring indicator

- RS232C cable

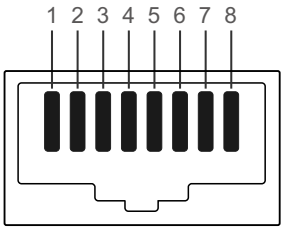
  Cable: Cross Cable



-P1-		-P1-		-P2-		-P2-
Female	Rx	2	-------->	1	Tx	Female
	Tx	3	<--------	2	Rx	
	Gnd	5	---------	3	Gnd	

LAN Cable

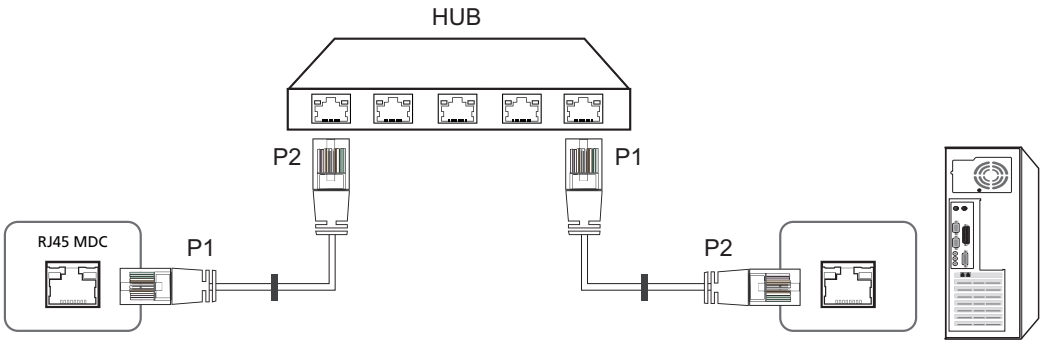
- Pin assignment



Pin No	Standard Color	Signal
1	White and orange	TX+
2	Orange	TX-
3	White and green	RX+
4	Blue	NC
5	White and blue	NC
6	Green	RX-
7	White and brown	NC
8	Brown	NC

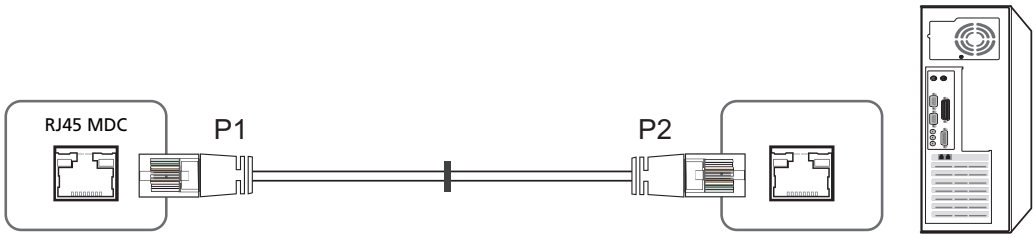
- Connector : RJ45

Direct LAN cable (PC to HUB)



Signal	P1		P2	Signal
TX+	1	<-------->	1	TX+
TX-	2	<-------->	2	TX-
RX+	3	<-------->	3	RX+
RX-	6	<-------->	6	RX-

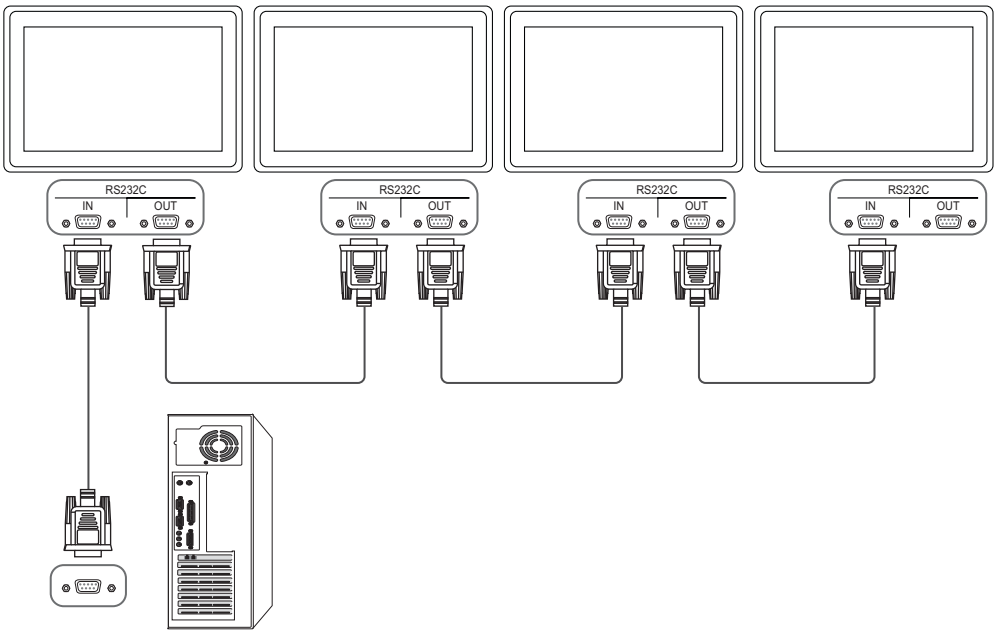
Cross LAN cable (PC to PC)



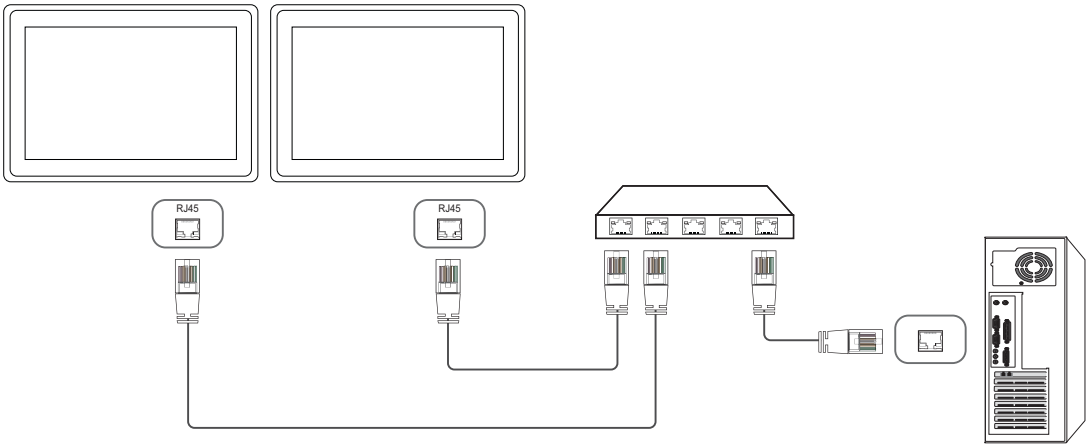
Signal	P1		Pi2	Signal
TX+	1	<-------->	3	RX+
TX-	2	<-------->	6	RX-
RX+	3	<-------->	1	TX+
RX-	6	<-------->	2	TX-

1.5.2 Connection

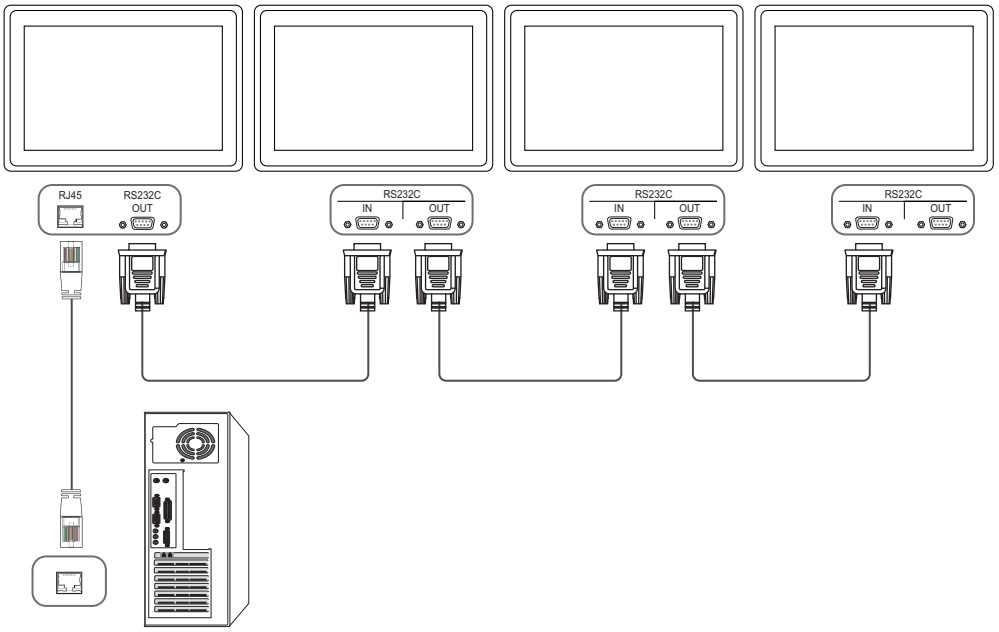
- Connection 1



- Connection 2



- Connection 3



1.5.3 Control Codes

Viewing control state (Get control command)

Header	Command	ID	Data length	Checksum
0xAA	Command type		0	

Controlling (Set control command)

Header	Command	ID	Data length	Data	Checksum
0xAA	Command type		1	Value	

Command

No.	Command type	Command	Value range
1	Power control	0x11	0~1
2	Volume control	0x12	0~100
3	Input source control	0x14	-
4	Screen mode control	0x18	-
5	Screen size control	0x19	0~255
6	PIP on/off control	0x3C	0~1
7	Auto adjustment control	0x3D	0
8	Video wall mode control	0x5C	0~1
9	Safety Lock	0x5D	0~1

- Issued IDs can be displayed in hexadecimals. However, ID 0 must be displayed as 0xFF.
- All communications take place in hexadecimals. The checksum is calculated by adding up all values except the header. If a checksum adds up to be more than 2 digits as shown below (11+FF+01+01=112), the first digit is removed.

E.g. Power On & ID=0

Header	Command	ID	Data length	Data 1	Checksum
0xAA	0x11		1	"Power"	

Header	Command	ID	Data length	Data 1	12
0xAA	0x11		1	1	

- To control all devices connected by a serial cable simultaneously irrespective of IDs, set the ID as "0xFE" and transmit commands. Commands will be executed by each device but ACK will not respond.

Power control

- Function

  A product can be powered on and off using a PC.

- Viewing power state (Get Power ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x11		0	

- Setting power ON/Off (Set Power ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x11		1	"Power"	

"Power": Power code to be set on a product.

1 : Power ON

0 : Power OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x11	"Power"	

"Power": Power code to be set on a product.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x11	"ERR"	

"ERR" : A code showing what error has occurred.

Volume control

- Function

  The volume of a product can be adjusted using a PC.

- Viewing volume state (Get Volume Status)

Header	Command	ID	Data length	Checksum
0xAA	0x12		0	

- Setting the volume (Set Volume)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x12		1	"Volume"	

"Volume": Volume value code to be set on a product. (0-100)

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x12	"Volume"	

"Volume": Volume value code to be set on a product. (0-100)

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x12	"ERR"	

"ERR" : A code showing what error has occurred.

Input source control

- Function

  The input source of a product can be changed using a PC.

- Viewing input source state (Get Input Source Status)

Header	Command	ID	Data length	Checksum
0xAA	0x14		0	

- Setting the input source (Set Input Source)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x14		1	"Input Source"	

"Input Source": An input source code to be set on a product.

0x14	PC
0x1E	BNC
0x18	DVI
0x0C	Input source
0x04	S-video
0x08	Component
0x20	MagicInfo
0x1F	DVI_video
0x30	RF (TV)
0x40	DTV
0x21	HDMI1
0x22	HDMI1_PC
0x23	HDMI2
0x24	HDMI2_PC
0x25	Display Port

- DVI_video, HDMI1_PC and HDMI2_PC cannot be used with the Set command. They only respond to "Get" commands.
- This model does not support BNC, S-Video, Component, RF (TV), DTV, HDMI2 and HDMI2_PC, DisplayPort.
- **MagicInfo** is only available with models that contain the **MagicInfo** function.
- RF (TV) and DTV are only available with models that include a TV.

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x14	"Input Source"	

"Input Source": An input source code to be set on a product.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x14	"ERR"	

"ERR" : A code showing what error has occurred.

Screen

- Function

  The screen mode of a product can be changed using a PC.

  Screen mode cannot be controlled when the **Video Wall** function is enabled.

  This control can only be used on models that include a TV.

- Viewing screen status (Get Screen Mode Status)

Header	Command	ID	Data length	Checksum
0xAA	0x18		0	

- Setting the picture size (Set Picture Size)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x18		1	"Screen Mode"	

"Screen Mode": A code that sets the product status.

0x01	16 : 9
0x04	Zoom
0x31	Wide Zoom
0x0B	4 : 3

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x18	"Screen Mode"	

"Screen Mode": A code that sets the product status.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x18	"ERR"	

"ERR" : A code showing what error has occurred.

Screen size control

- Function

  The screen size of a product can be changed using a PC.

- Viewing the screen size (Get Screen Size Status)

Header	Command	ID	Data length	Checksum
0xAA	0x19		0	

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x19	"Screen Size"	

"Screen Size": Product screen size (range: 0 – 255, unit: inch)

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x19	"ERR"	

"ERR" : A code showing what error has occurred.

PIP On/Off control

- Function

  The PIP mode of a product can be turned on or off using a PC.

  - Only available on models that have the PIP function.
  - The mode cannot be controlled if **Video Wall** is set to **On**.
  - This function is not available in **MagicInfo**.

- Viewing PIP on/off state (Get the PIP ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x3C		0	

- Setting PIP on/off (Set the PIP ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x3C		1	"PIP"	

"PIP": A code used to turn the PIP mode of a product on or off.

1 : PIP ON

0 : PIP OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3C	"PIP"	

"PIP": A code used to turn the PIP mode of a product on or off.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x3C	"ERR"	

"ERR" : A code showing what error has occurred.

Auto adjustment control (PC and BNC only)

- Function

  Automatically adjust the PC system screen using a PC.

- Viewing auto adjustment state (Get Auto Adjustment Status)
  - None
- Setting auto adjustment (Set Auto Adjustment)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x3D		1	"Auto Adjustment"	

"Auto Adjustment" : 0x00 (at all times)

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3D	"Auto Adjustment"	

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x3D	"ERR"	

"ERR" : A code showing what error has occurred.

Video Wall Mode Control

- Function

  Video Wall Mode can be activated on a product using a PC.

  This control is only available on a product whose **Video Wall** is enabled.

  This function is not available in **MagicInfo**.

- Viewing video wall mode (Get Video Wall Mode)

Header	Command	ID	Data length	Checksum
0xAA	0x5C		0	

- Setting the video wall (Set Video Wall Mode)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x5C		1	"Video Wall Mode"	

"Video Wall Mode": A code used to activate Video Wall mode on a product.

1 : **Full**

0 : **Natural**

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5C	"Video Wall Mode"	

"Video Wall Mode": A code used to activate Video Wall mode on a product.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x5C	"ERR"	

"ERR" : A code showing what error has occurred.

Safety Lock

- Function

  PC can be used to turn the **Safety Lock** function on or off on a product.

  This control is available regardless of whether or not the power is turned on.

- Viewing the safety lock state (Get Safety Lock Status)

Header	Command	ID	Data length	Checksum
0xAA	0x5D		0	

- Enabling or disabling safety lock (Set Safety Lock Enable / Disable)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x5D		1	"Safety Lock"	

"Safety Lock": Safety lock code to be set on a product.

1 : ON

0 : OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5D	"Safety Lock"	

"Safety Lock": Safety lock code to be set on a product.

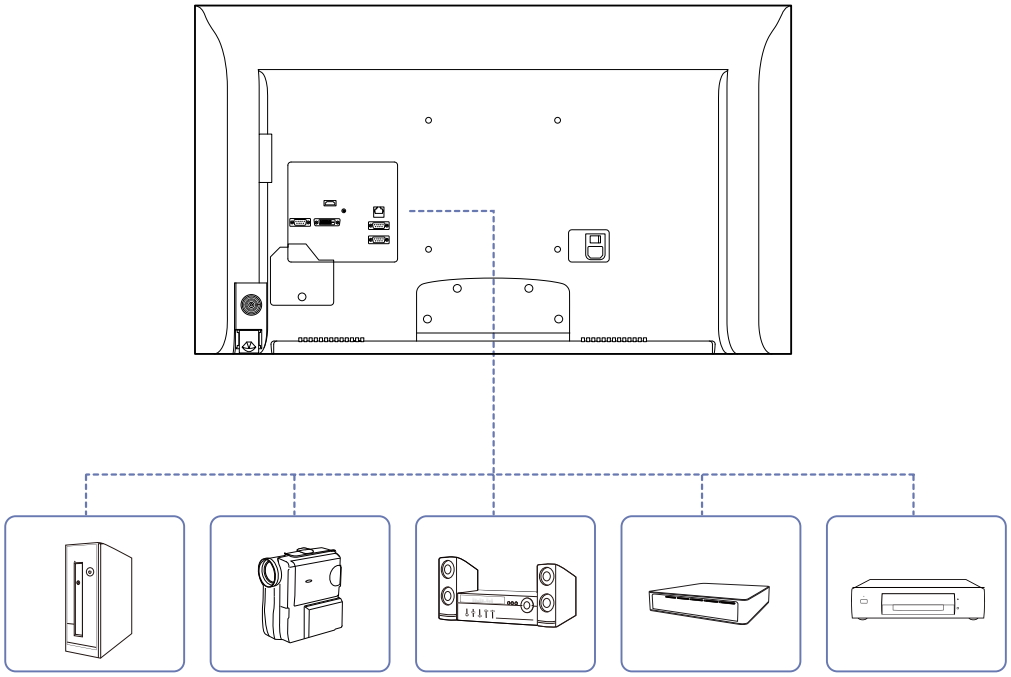
- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x5D	"ERR"	

"ERR" : A code showing what error has occurred.

2.1 Before Connecting

Check the following before you connect this product with other devices. Devices that can be connected to this product include PCs, camcorders, speakers, set top boxes and DVD/Blu-ray Disc players.



2.1.1 Pre-connection Checkpoints

- Before connecting a source device, read the user manual provided with it. The number and locations of ports on source devices may differ from device to device.
- Do not connect the power cable until all connections are completed. Connecting the power cable during connection may damage the product.
- Connect the sound ports correctly: left = white and right = red.
- Check the types of ports at the back of the product you want to connect.

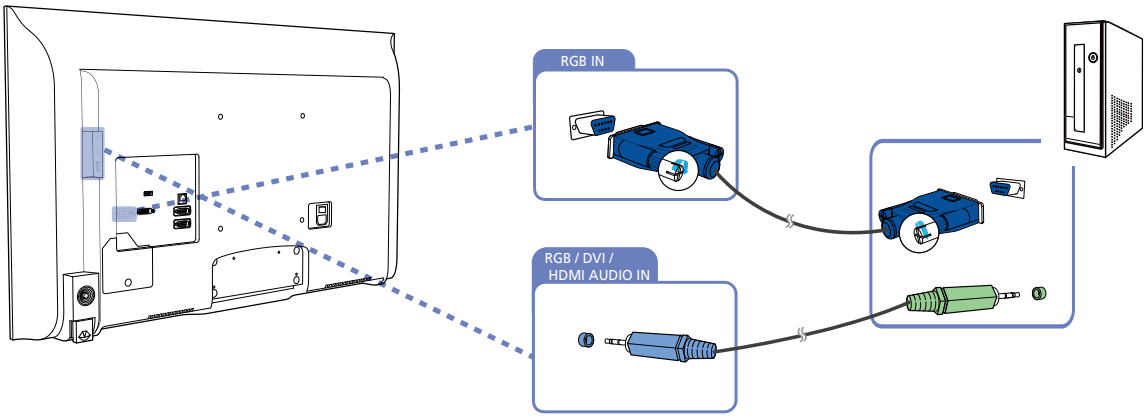
2.2 Connecting and Using a PC

2.2.1 Connecting to a PC

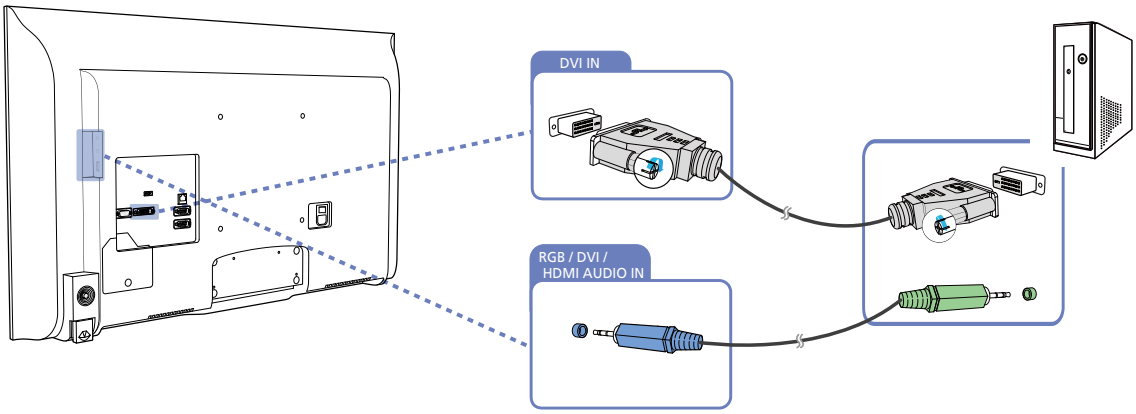
- Do not connect the power cable before connecting all other cables.
  Ensure you connect a source device first before connecting the power cable.
- A PC can be connected to the product in a variety of ways.
  Select a connection method suitable for your PC.

Connecting parts may differ in different products.

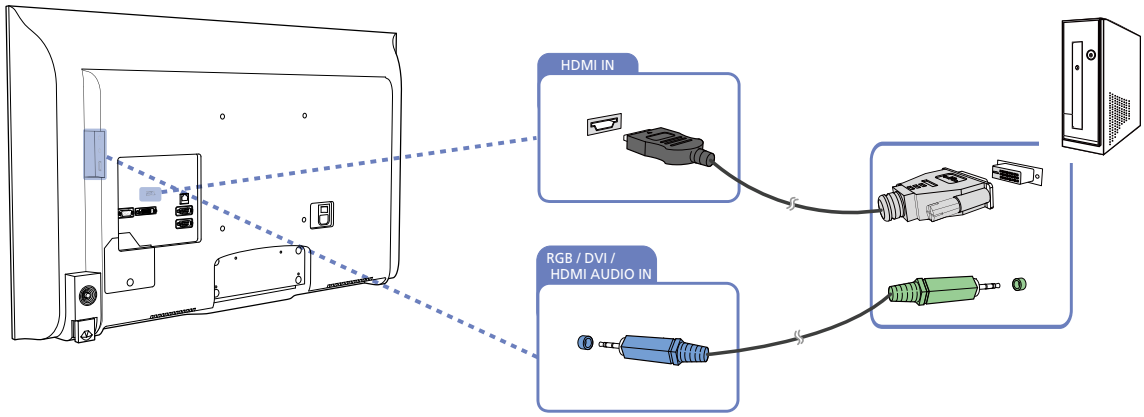
Connection using the D-SUB cable (Analog type)



Connection using a DVI cable (Digital type)

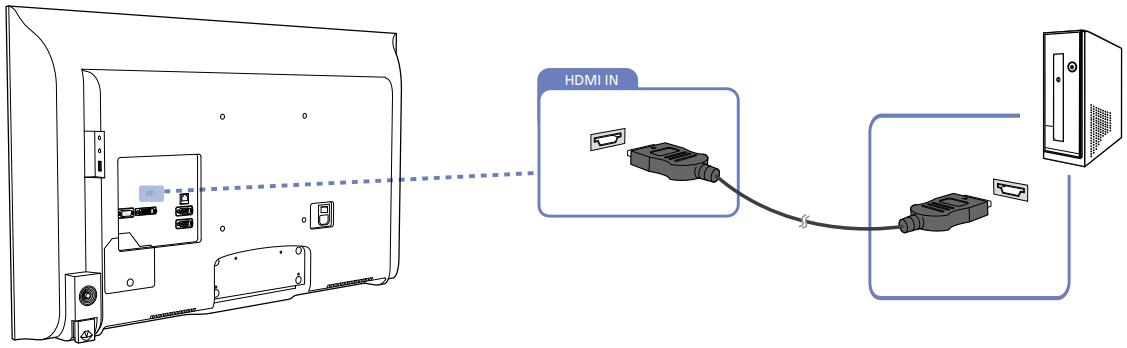


Connection Using an HDMI-DVI Cable



When you connect a PC to the product using an HDMI-DVI cable, set **Edit Name** to **DVI PC** to access video and audio content stored on the PC.

Connection Using an HDMI Cable



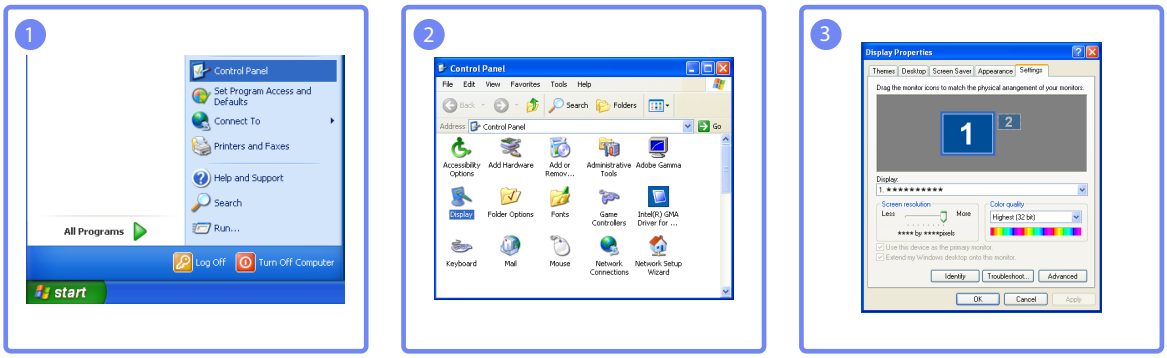
2.2.2 Changing the Resolution

Adjust the resolution and refresh rate in Control Panel on your PC to obtain optimum picture quality.

The picture quality of TFT-LCDs may degrade if the optimum resolution is not selected.

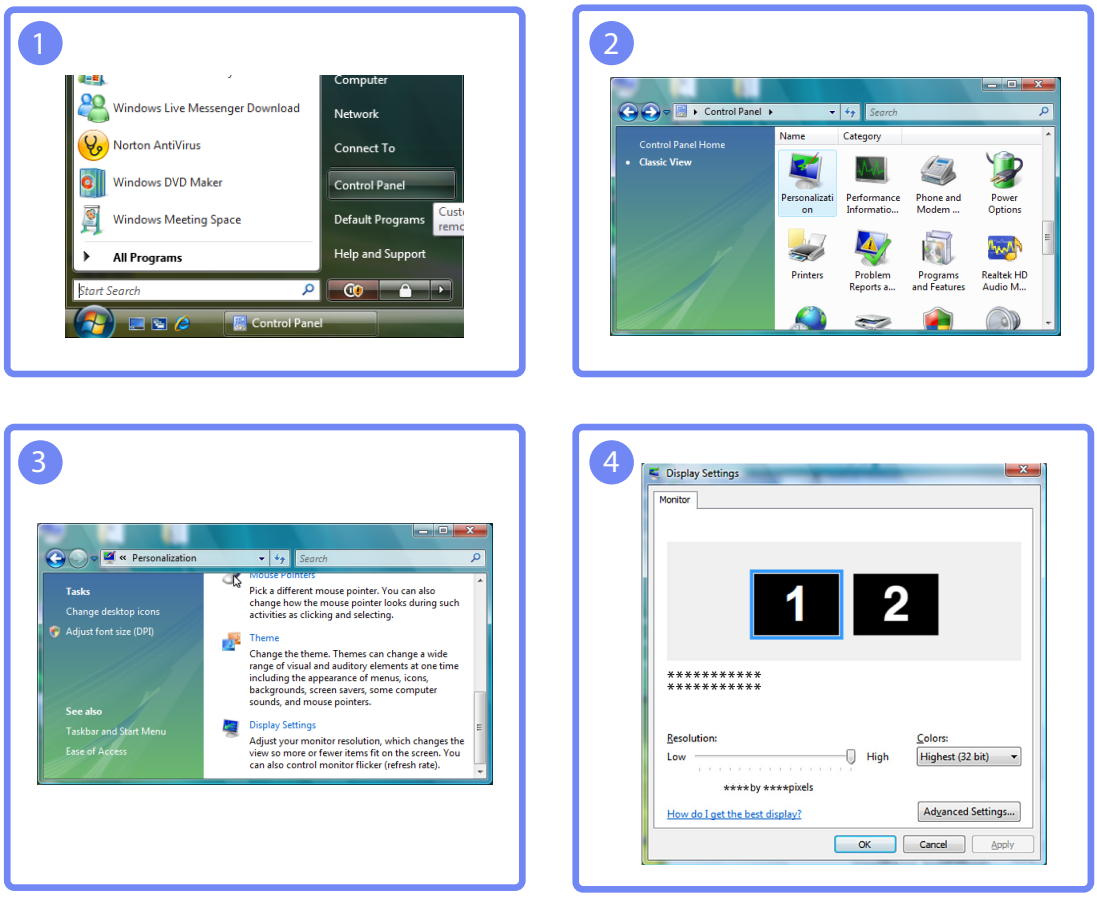
Changing the Resolution on Windows XP

Go to **Control Panel** → **Display** → **Settings**, and change the resolution.



Changing the Resolution on Windows Vista

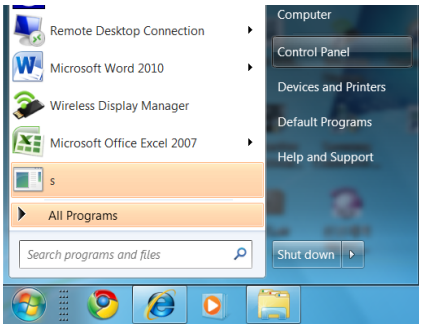
Go to **Control Panel** → **Personal Settings** → **Display Settings**, and change the resolution.



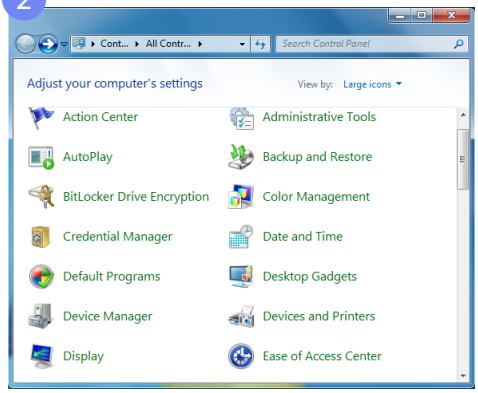
Changing the Resolution on Windows 7

Go to **Control Panel** → **Display** → **Screen Resolution**, and change the resolution.

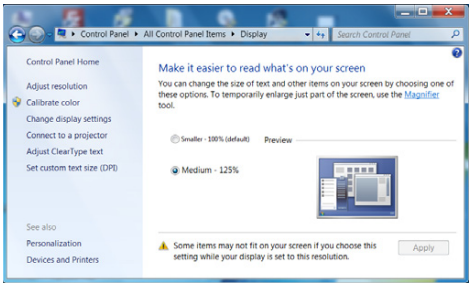
1



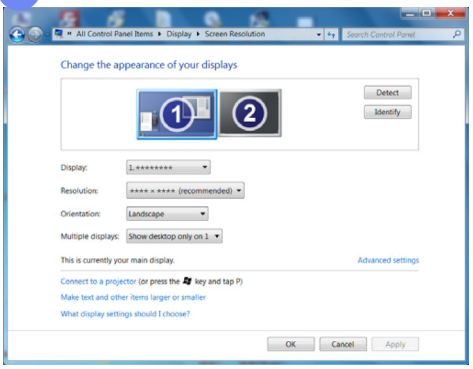
2



3



4

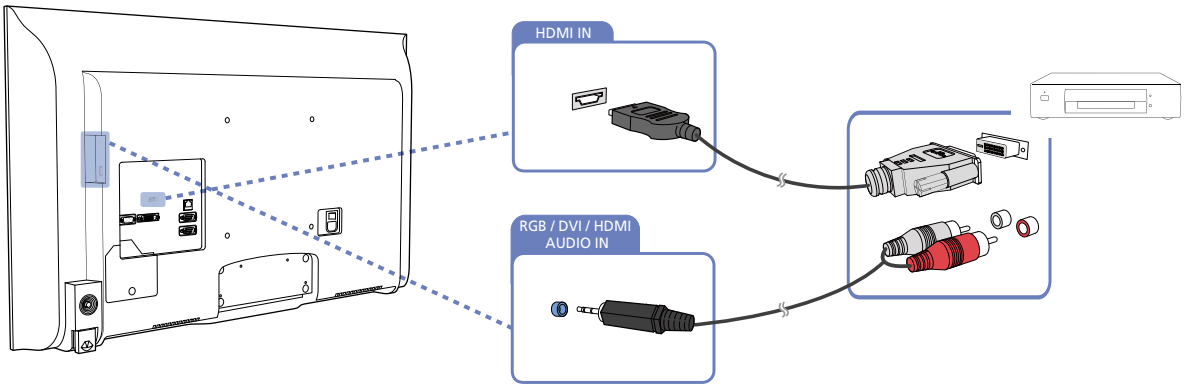


2.3 Connecting to a Video Device

- You can connect a video device to the product using a cable.

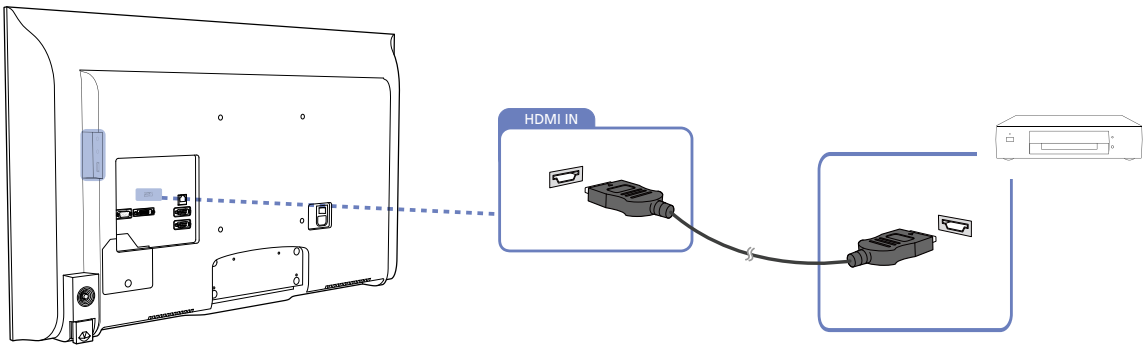
  - Do not connect the power cable before connecting all other cables.
    Ensure you connect a source device first before connecting the power cable.
  - Connecting parts may differ in different products.
  - Press the **SOURCE** button on the remote control to change the source.

2.3.1 Connection Using an HDMI-DVI Cable



- Audio will not be enabled if the product is connected to a video device using an HDMI-DVI cable. To resolve this, additionally connect an audio cable to the audio ports on the product and video device.
- When you connect a video device to the product using an HDMI-DVI cable, set **Edit Name** to **DVI Device** to access video and audio content stored on the video device.
- Supported resolutions include 1080p (50/60Hz), 720p (50/60Hz), 480p, and 576p.

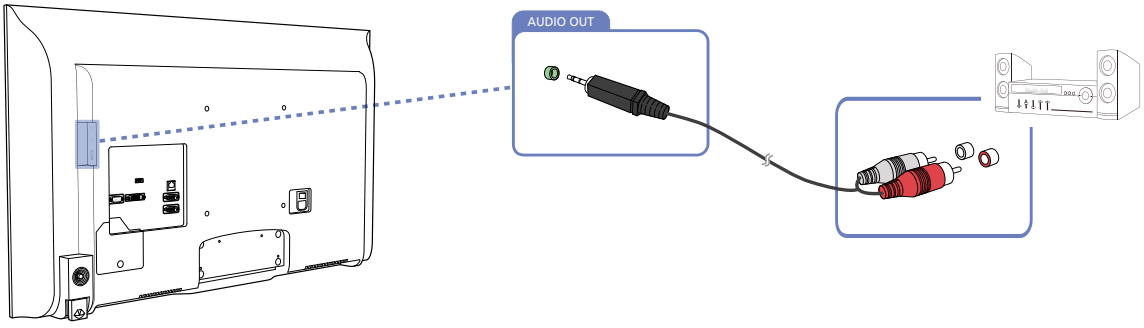
2.3.2 Connection Using an HDMI Cable



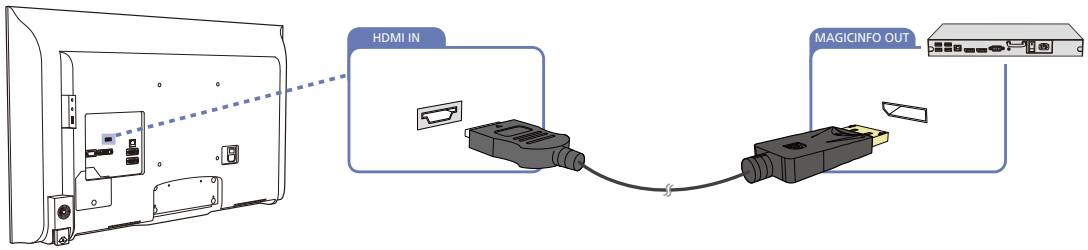
Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

- For better picture and audio quality, connect to a digital device using an HDMI cable.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
  - To connect the product to a digital device that does not support HDMI output, use an HDMI/DVI and audio cables.
- The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the product. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
- Be sure to use an HDMI cable with a thickness of 14 mm or less.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- A basic high-speed HDMI cable or one with ethernet is recommended. This product does not support the ethernet function via HDMI.

2.3.3 Connecting to an Audio System



2.4 Connecting the network box(Sold separately)



Connect the DP-HDMI cable to the [HDMI IN] port on the product and the [MAGICINFO OUT] port on the network box.

For details on how to connect to a network box, refer to the user's manual provided with the network box upon purchase.

2.4.1 MagicInfo

To use **MagicInfo**, a network box(sold separately) must be connected to the product.

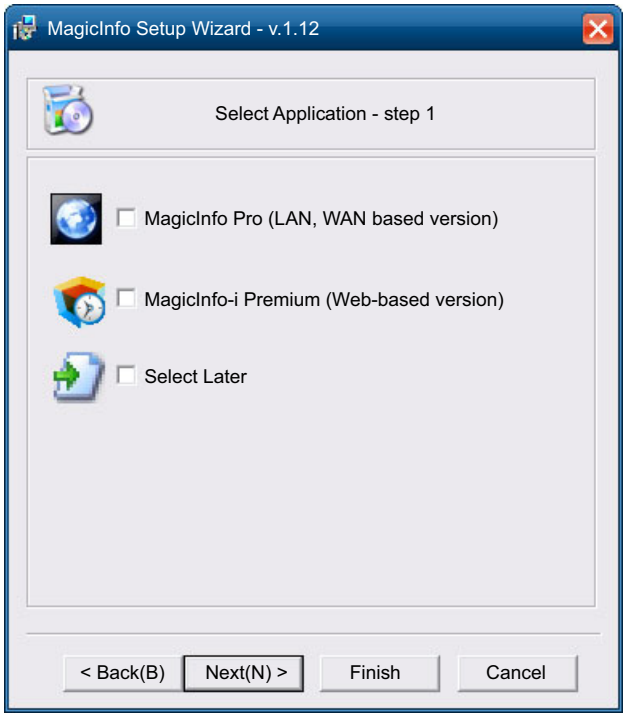
- To change the MagicInfo settings, run "MagicinfoSetupWizard" on the desktop.
- For details on how to use **MagicInfo**, refer to the DVD provided with the network box.
- The information in this section is subject to change without notice for quality improvement.
- If a problem occurs after installing an operating system other than the one provided with the network box, restoring the previous version of the operating system, or installing software that is not compatible with the operating system provided, you will not be able to benefit from technical support and will be charged a fee for a visit from a service technician. A product exchange or refund will also not be available.

Entering MagicInfo mode

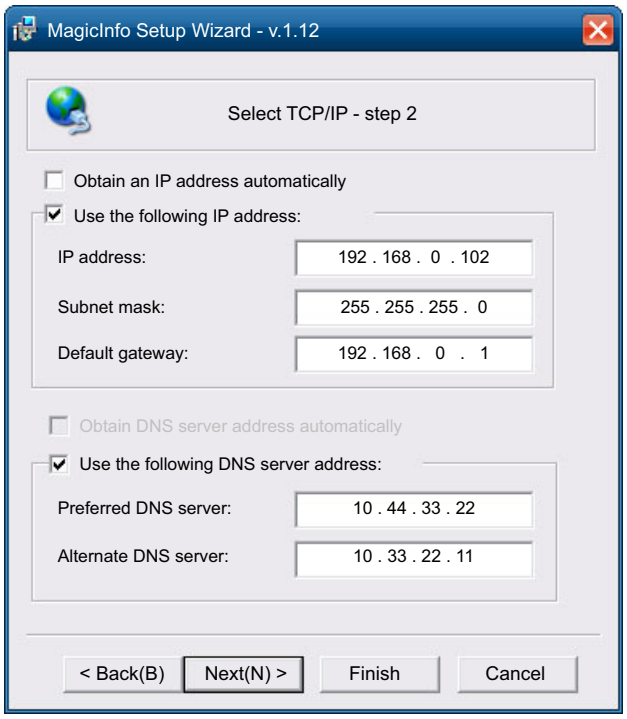
1. After installing and connecting the network box(sold separately) to the product, power on the product.
2. Press **SOURCE** on the remote control, and select **MagicInfo**.

   Connecting the network box to the [HDMI IN] port on the product will change **Source** from **HDMI** to **MagicInfo**.

3 Select the default application you want to run when MagicInfo starts.

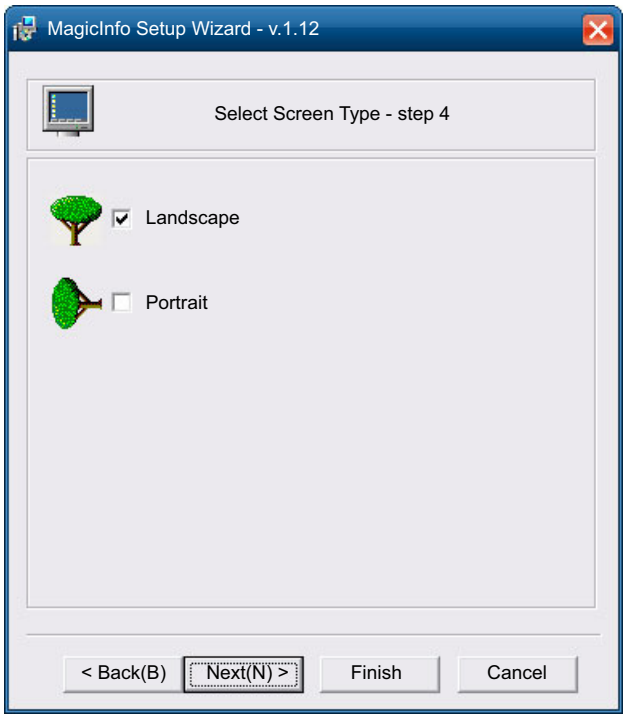


4 Enter the IP information.

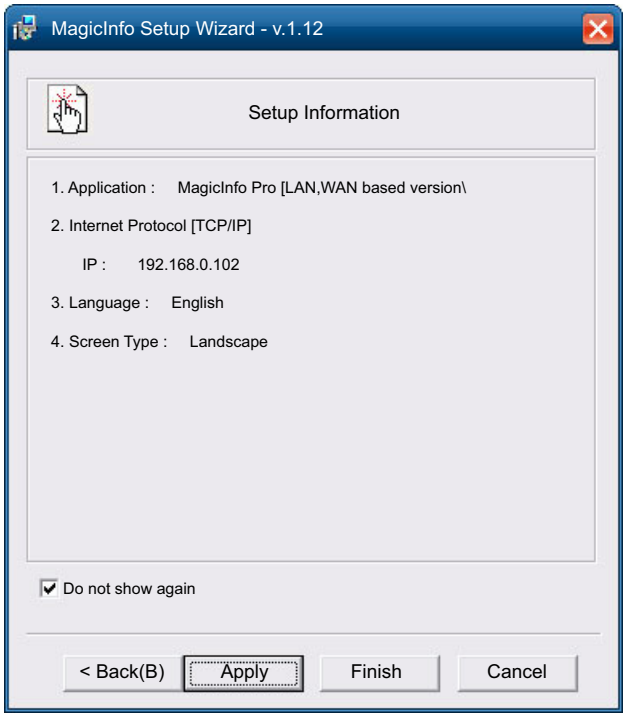

MagicInfo Setup Wizard - v.1.12
Select TCP/IP - step 2
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 102
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 0 . 1
Obtain DNS server address automatically
Use the following DNS server address:
Preferred DNS server: 10 . 44 . 33 . 22
Alternate DNS server: 10 . 33 . 22 . 11
< Back(B)
Next(N) >
Finish
Cancel

5 Select a language. (The default language is English.)

6 Select a display mode.



7 Double-check the settings you have just configured.



- If the execution icon does not appear, double-click the **MagicInfo** icon on the desktop. The icon will appear at the bottom right of the screen.
- For further details on how to use **MagicInfo**, refer to the MagicInfo Lite Edition software CD provided with the network box.

2.5 Changing the Input source

2.5.1 Source

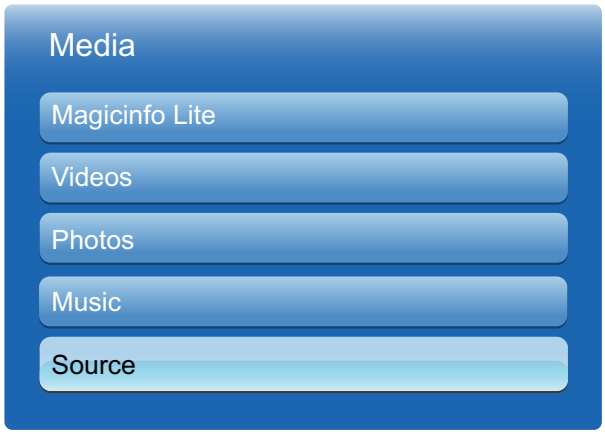
MENU → Media → Source → ENTER

Source allows you to select a variety of sources and change source device names.

Source

You can display the screen of a source device connected to the product. Select a source from source list to display the screen of the selected source.

Refer to page 119 for details about the Source menu.



The displayed image may differ depending on the model.

The input source can also be changed by using the SOURCE button on the remote control.

The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

3 Using MDC

MDC (Multiple Display Control) is an application that allows you to easily control multiple display devices simultaneously using a PC.

3.1 Configuring Settings for Multi Control

MENU → System → Multi Control → ENTER

Assign an individual ID to your product.

3.1.1 Configuring settings for Multi Control

- **MDC Connection**

  Selects a port to receive the **MDC** inputs from.

  - **RS232C MDC**

    Communicates with the **MDC** via a RS232C MDC cable.

  - **RJ45 MDC**

    Communicates with the **MDC** via an RJ45 MDC cable.

- **ID Setup**

  Assign an ID to a set. (Range: 0~99)

  Press ▲/▼ to select a number, and press [].

- **ID Input**

  Enter the ID number of the product connected to the input cable for input signal reception.

  Enter the number you want using the number buttons on the remote control.

3.2 MDC Program Installation/Uninstallation

3.2.1 Installation

1 Insert the installation CD into the CD-ROM drive.

2 Click the **MDC Unified** installation program.

If a software installation window is not displayed on the main screen, install with the "MDC Unified" execution file in the MDC folder on the CD.

3 Select a language for installation. Next, click "OK".

4 When the "Welcome to the InstallShield Wizard for MDC_Unified" screen appears, click "Next".

5 In the "License Agreement" window displayed, select "I accept the terms in the license agreement" and click "Next".

6 In the displayed "Customer Information" window, fill out all the information fields and click "Next".

7 In the displayed "Destination Folder" window, select the directory path you want to install the program in and click "Next".

If the directory path is not specified, the program will be installed in the default directory path.

8 In the displayed "Ready to Install the Program" window, check the directory path to install the program in and click "Install".

9 Installation progress will be displayed.

10 Click "Finish" in the displayed "InstallShield Wizard Complete" window.

Select "Launch MDC Unified" and click "Finish" to run the MDC program immediately.

11 The MDC Unified shortcut icon will be created on the desktop after installation.

- The MDC execution icon may not be displayed depending on the PC system or product specifications.
- Press F5 if the execution icon is not displayed.

3.2.2 Uninstallation

1 Select **Settings** > **Control Panel** on the **Start** menu and double-click **Add/Delete Program**.

2 Select **MDC Unified** from the list and click **Change/Remove**.

MDC installation can be affected by the graphics card, mother board and network conditions.

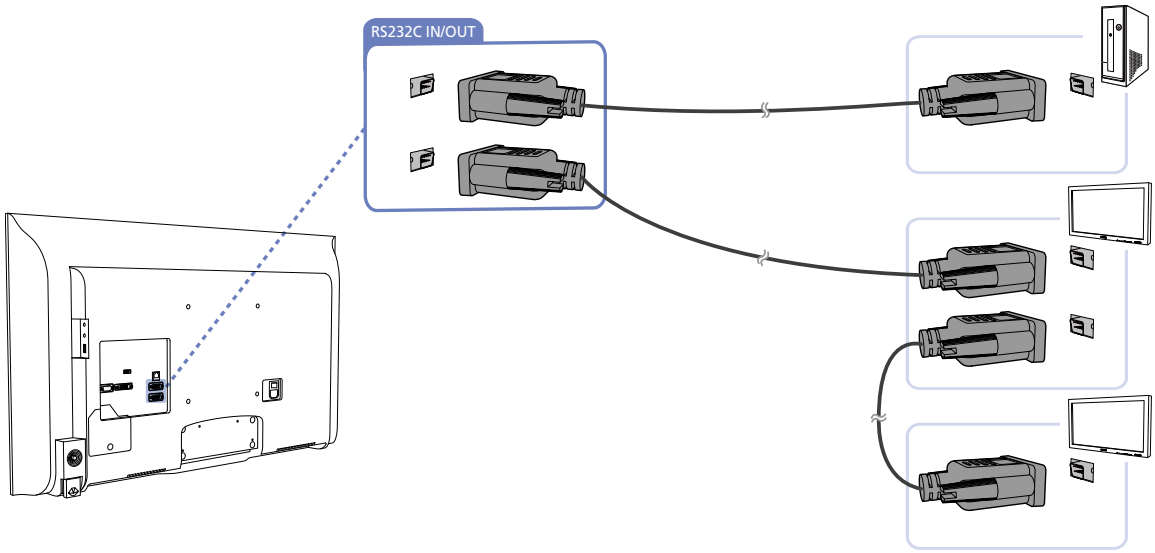
3.3 What is MDC?

3.3.1 Connecting to MDC

Using MDC via RS-232C (serial data communications standards)

An RS-232C serial cable must be connected to the serial ports on the PC and monitor.

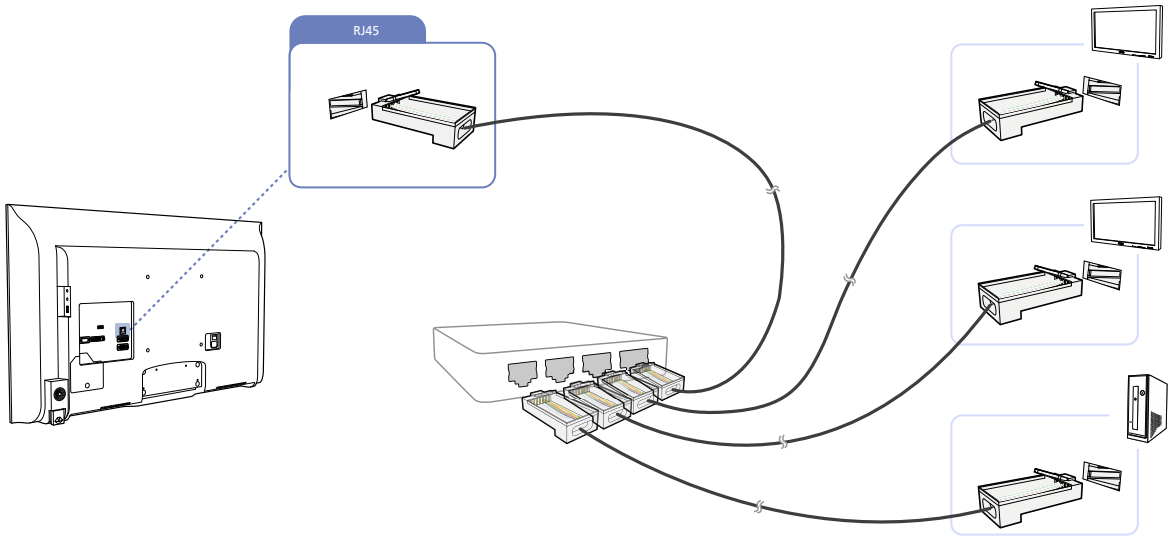
Connection Using the RS232C Cable



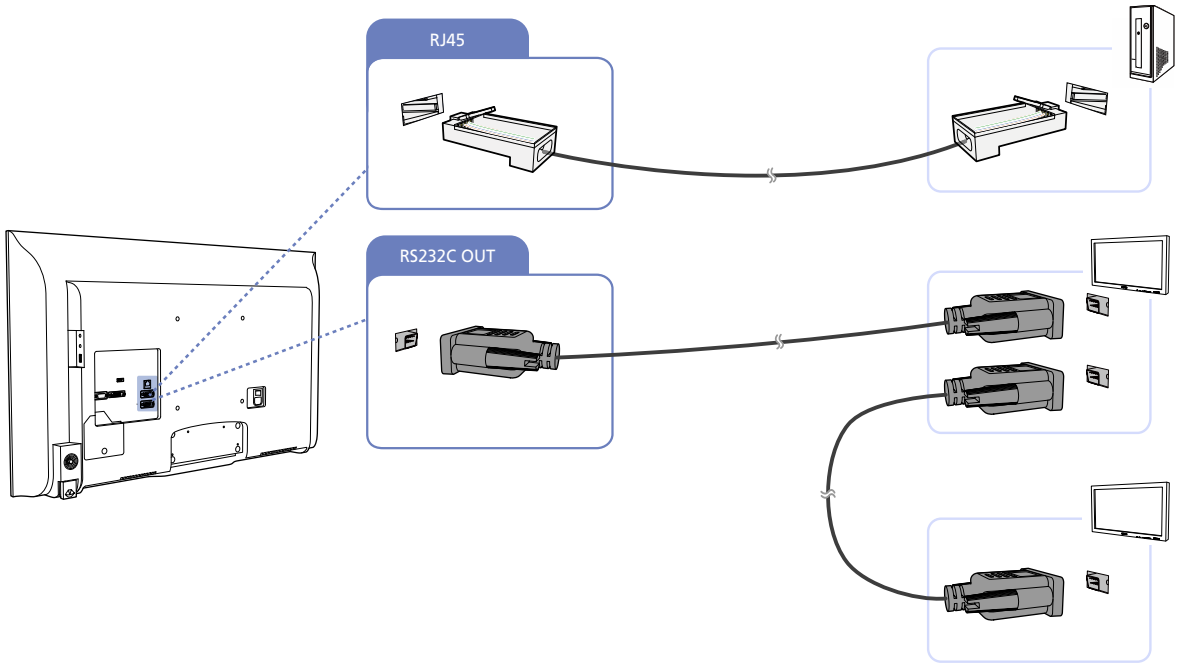
Using MDC via Ethernet

Enter the IP for the primary display device and connect the device to the PC. One display device can connect to another using an RJ45 serial cable.

Connection using a direct LAN cable



Connection using a cross LAN cable



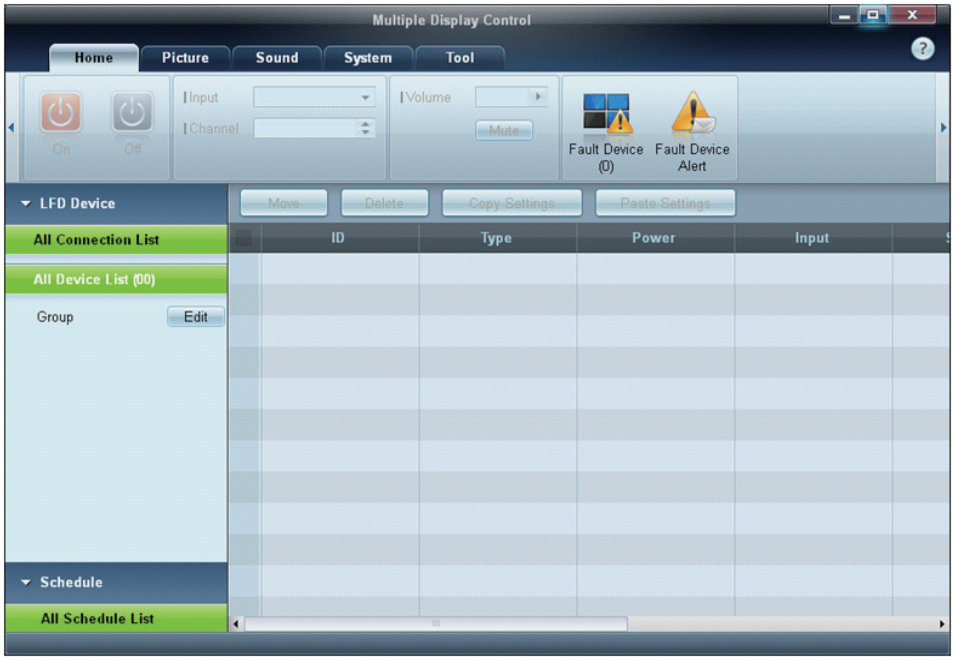
Multiple products can be connected using the [RS232C IN / OUT] port on the product.

3.3.2 Connection Management

Connection management includes the **Connection list** and **Connection list modification options**.

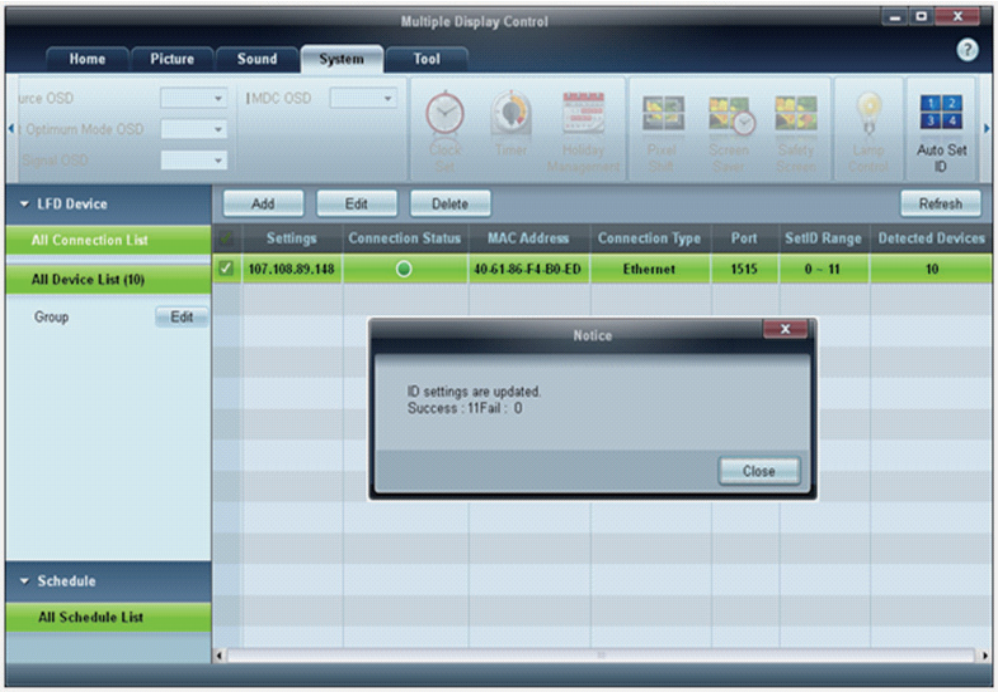
Connection list – Connection list shows the details of the connections such as connection setting (IP/COM, Port No, MAC, and **Connection Type**), connection status, **Set ID Range**, and detected devices. Each connection can contain a maximum of 100 devices connected in serial daisy-chain fashion. All the LFDs detected in a connection are displayed in the Device list, where the user can make groups and send commands to detected devices.

Connection list modification options – Connection modification options includes **Add**, **Edit**, **Delete**, and **Refresh**.



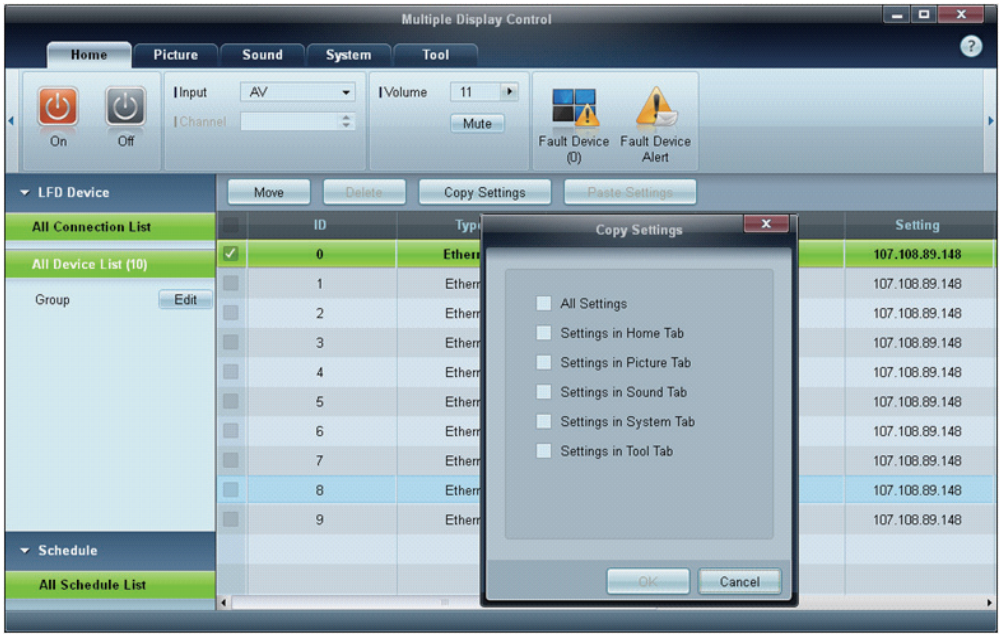
3.3.3 Auto Set ID

Auto Set ID feature assigns a Set ID for all the LFDs connected in daisy-chain of a selected connection. There can be a maximum of 100 LFDs in a connection. The Set ID is assigned sequentially in the daisy-chain running from 1 to 99, and then finally to Set ID 0.



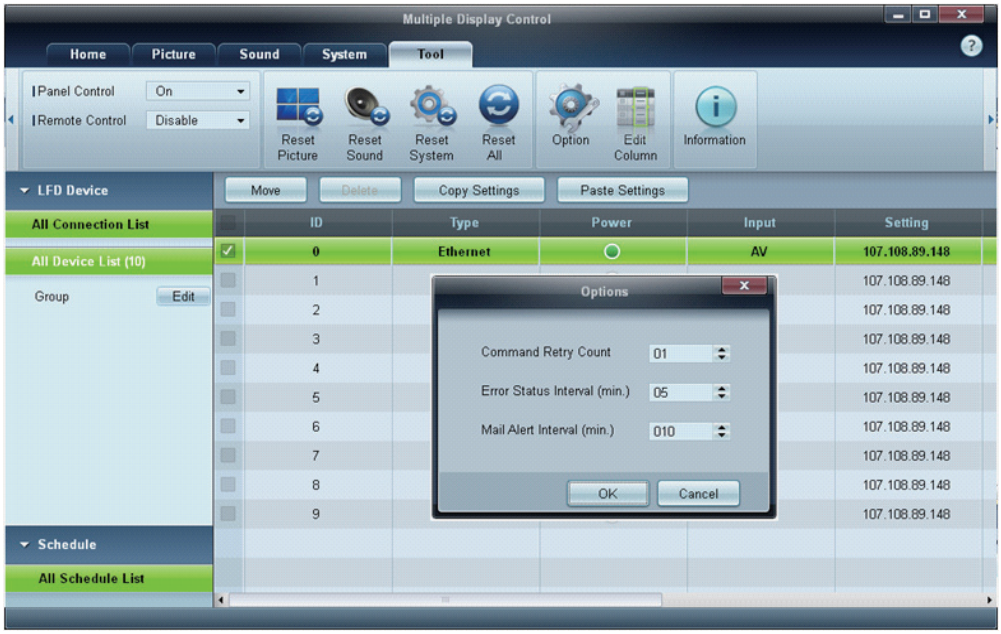
3.3.4 Cloning

Using the Cloning feature, you can copy the setting of one LFD and apply it to multiple selected LFDs. You can select specific tab categories or all tab categories for cloning, using the copy setting option window.



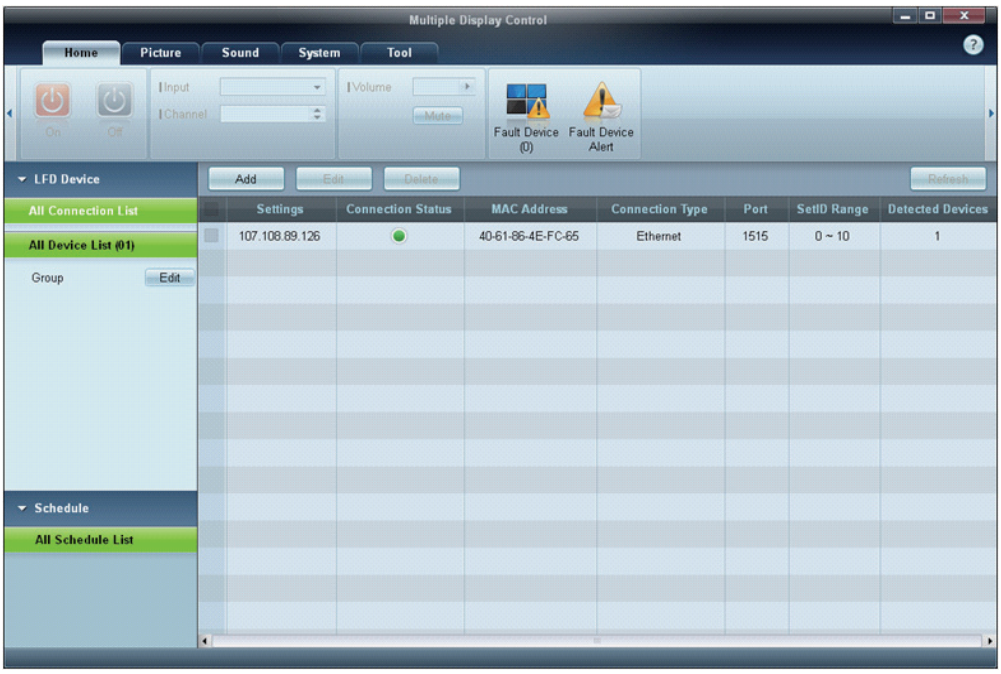
3.3.5 Command Retry

This feature is used to specify the maximum number of times the MDC command will be retried in case of there being no reply or a corrupted reply from an LFD. The retry count value can be set using the MDC options window. The retry count value must be between 1-10. The default value is 1.



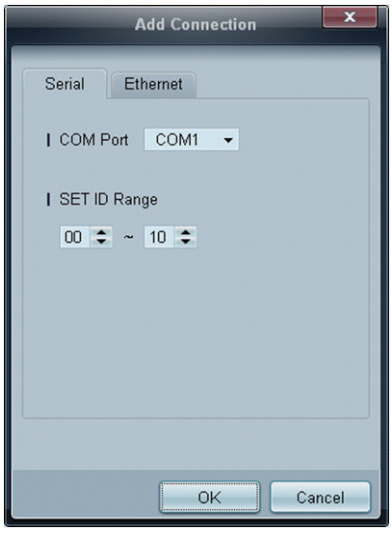
3.3.6 Getting Started with MDC

1 To start the program, click **Start** → **Programs** → **Samsung** → **MDC Unified**.

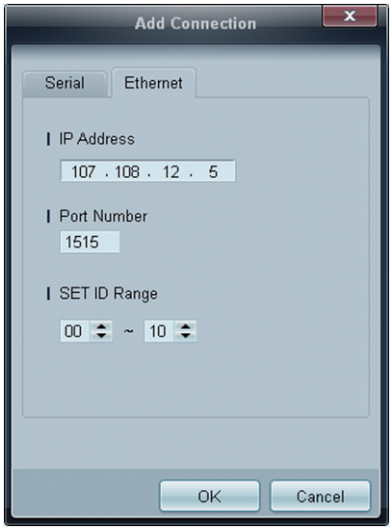


2 Click **Add** to add a display device.

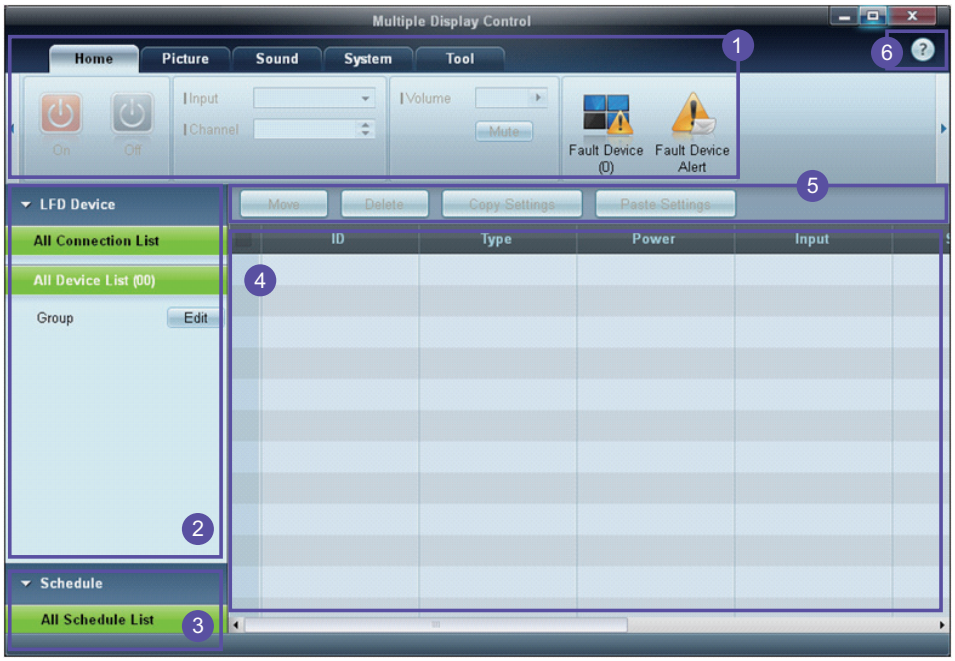
- If the connection is established via RS232C, go to **Serial** and specify the **COM Port**.



- If the connection is established via **Ethernet**, enter the IP that was entered for the display device.



3.3.7 Main Screen Layout



1 Menu Bar	Change the status of a display device or the properties of the program.
2 Device Category	View a list of connected display devices or device groups.
3 Schedule Category	View a list of schedules for display devices.
4 Set List	Select the display device you want to adjust.
5 Modify the Set List	Add, edit, regroup or delete sets.
6 Help Topics	Display help topics for the program.

3.3.8 Menus

You can power on or off a selected device or change the input source or volume of the device.

Choose display devices from the list of sets, and select the **Home** tab.

1 Home

Select an item and change the corresponding setting.

Power

- **On**: Power on a selected display.
- **Off**: Power off a selected display.

Input

- Input Source : Change the input source.

  - Input sources available can vary depending on the Display Device Models.
  - The input source can be changed only for displays that are turned on.

- **Channel** : Change the channel.

  - The TV channel can be changed by using the up/down arrow keys.
  - The channel can be changed only when the input source is **TV**.
  - Only registered channels can be selected.

2 Volume

The volume can be changed or the sound can be muted only for displays that are turned on.

Volume

- The volume can be adjusted using the slider bar in the range of 0 to 100.

  Adjust the volume of a selected display.

Input

- Enable or disable **Mute** for a selected display.

  Mute will automatically be disabled if **Volume** is adjusted when **Mute** is on.

3 Alert

- **Fault Device**
  - This menu shows a list of display devices which have following errors - fan error, temperature error, brightness sensor error, or lamp error.

    Select a display device from the list. The **Repair** button will be enabled. Click the **Refresh** button to refresh the error status of the display device. The recovered display device will disappear from the **Fault Device List**.

Fault Device Alert

- Display device in which error is detected will be reported by email.

  Fill in all required fields. The **Test** and **OK** buttons will be enabled. Ensure the **Sender** information and at least one **Recipient** are entered.

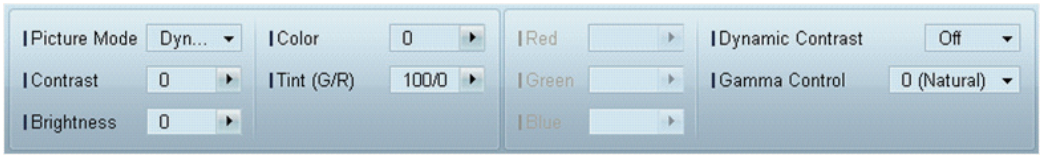
3.3.9 Screen Adjustment

The screen settings (contrast, brightness, etc.) can be adjusted.

Choose display devices from the list of sets, and select the **Picture** tab.

Custom

Select an item and change the corresponding screen setting.



- **Color** and **Tint** are not available if the input source is **PC**.
- **Red**, **Green**, **Blue** and **PC Screen Adjustment** are not available if the input source is **Video**.
- **Color**, **Tint**, **Color Tone**, **Color Temp**, **Red**, **Green**, **Blue** and **PC Screen Adjustment** are not available if both **PC Source** and **Video Source** are selected.

Contrast

- Adjust the contrast for the selected display device.

Brightness

- Adjust the brightness for the selected display device.

Color

- Adjust the colors for the selected display device.

Tint (G/R)

- Adjust the tint for the selected display device.

Color Tone

- Adjust the background color tone for the selected display device.

Color Temp

- Adjust the color temperature for the selected display device.

  This option is enabled if **Color Tone** is set to **Off**.

Red

- Customize the intensity of red color for the selected display device.

Green

- Customize the intensity of green color for the selected display device.

Blue

- Customize the intensity of blue color for the selected display device.

Options

Dynamic Contrast

Adjust the **Dynamic Contrast** for the selected display device.

Gamma Control

Change the gamma value for the selected display.

Auto Motion Plus

This option is used to view dynamic images.

- **Off**: Disable the **Auto Motion Plus** function.
- **Clear**: Set the level of **Auto Motion Plus** to clear. This mode is suitable to display vivid images.
- **Standard**: Set the level of **Auto Motion Plus** to standard.
- **Smooth**: Set the level of **Auto Motion Plus** to smooth. This mode is suitable to display smooth images.
- **Custom**: Customize the level of screen burn-in or flickering.
- **Demo**: This function demonstrates the technology of **Auto Motion Plus**. The result when the mode is changed can be previewed on the left side of the window.

Auto Motion Plus may not be available depending on the product.

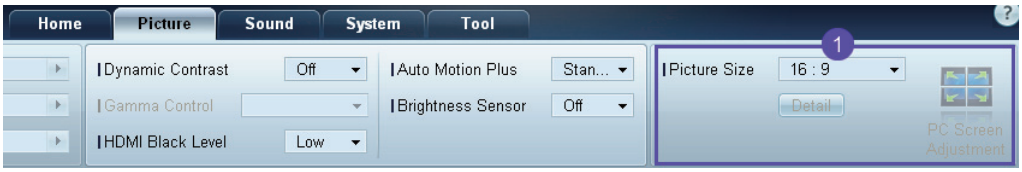
Brightness Sensor

Enable or disable the **Brightness Sensor** for the selected display device.

The **Brightness Sensor** detects the ambient light intensity and automatically adjusts the screen brightness.

Brightness Sensor may not be available depending on the product.

Size



Picture Size

Adjust the screen size for the selected display device.

The **Detail** item will be disabled if **Picture Size** is set to a mode that does not support detailed configuration.

The -/+ buttons can be used to adjust **Zoom**.

The screen can be relocated using the up/down/left/right buttons.

Detail

You can view details of the selected screen size.

PC Screen Adjustment

Frequency adjustment or fine-tuning is available by using the -/+ buttons in **Coarse** or **Fine**.

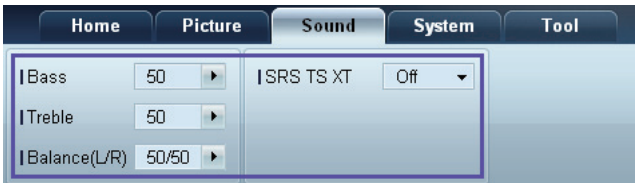
To relocate the screen, click one of the four images below **Position**.

To automatically adjust the frequency, fine-tune or relocate the screen, click **Auto Adjustment**.

3.3.10 Sound Adjustment

You can change the sound settings.

Choose display devices from the list of sets, and select the **Sound** tab.



The **Bass** or **Treble** item will be disabled if the item is not supported by the selected set.

Bass

Adjust the bass for the selected display.

Treble

Adjust the treble for the selected display.

Balance (L/R)

Adjust the volume of the left and right speakers of the selected display device.

SRS TS XT

Enable or disable the **SRS TS XT** effect for the selected display device.

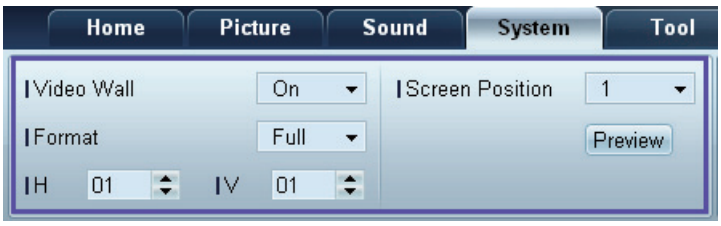
3.3.11 System Setup

Choose display devices from the list of sets, and select the **System** tab.

Video Wall

The **Video Wall** function can be used to display part of a whole picture or repeat the same picture on each of connected multiple display devices.

Video Wall is enabled only when devices are in the group.

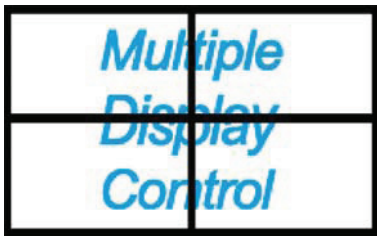


Video Wall

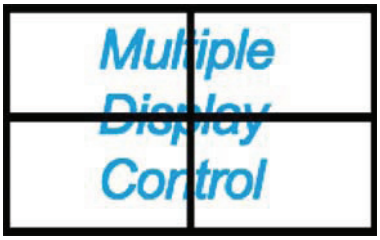
Enable or disable **Video Wall**.

Format

Select the format to display the split screen.



Full



Natural

H

Select the number of horizontal display devices.

A maximum of 15 displays can be arranged in a row.

A maximum of 6 can be assigned to V if 15 is assigned to H.

V

Select the number of vertical display devices.

A maximum of 15 displays can be arranged in a row.

A maximum of 6 can be assigned to V if 15 is assigned to H.

Screen Position

View the layout of displays (configured by the screen divider) or change the layout as required.

Screen Position and **Preview** are enabled when **Video Wall** is set to on.

Note that if multiple sets are selected, **Preview** is enabled only if the settings for H and V match the layout of the selected sets.

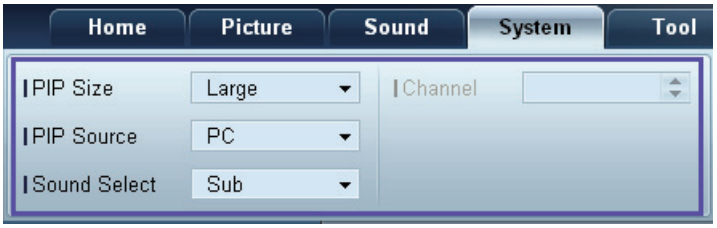
To change the **Position**, select a set and drag it to a new position.

The range of screen divider settings may differ depending on the model.

PIP

Basic information required to adjust **PIP** will appear in the menu screen.

- **PIP** will be disabled when **Video Wall** is **ON**.
- Note that **Picture Size** is disabled when **PIP** is **ON**.



PIP Size

View the **PIP Size** of the current display.

PIP Source

Select a PIP input source.

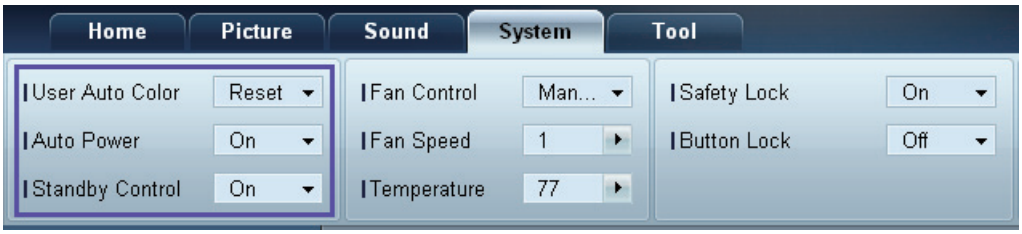
Sound Select

Select and enable the sound from either the primary screen or secondary screen.

Channel

The channel can be changed if **PIP Source** is **TV**.

General



User Auto Color

Automatically adjust the screen colors.

Available only in **PC** mode.

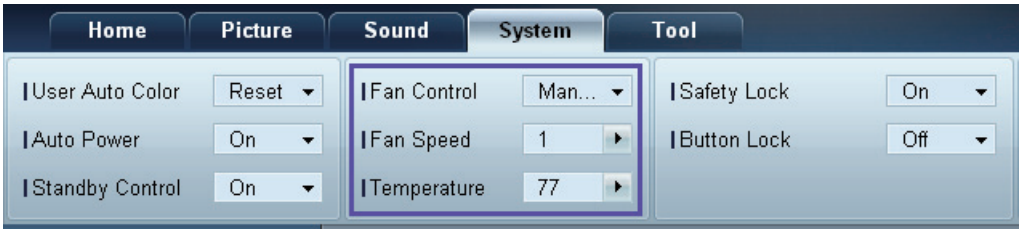
Auto Power

Set the product to automatically power on.

Standby Control

Set the standby mode to activate if an input source is not detected.

Fan & Temperature



Configure the settings required to detect the fan speed and internal temperature for the product's protection.

Fan Control

Select a method to configure the fan speed.

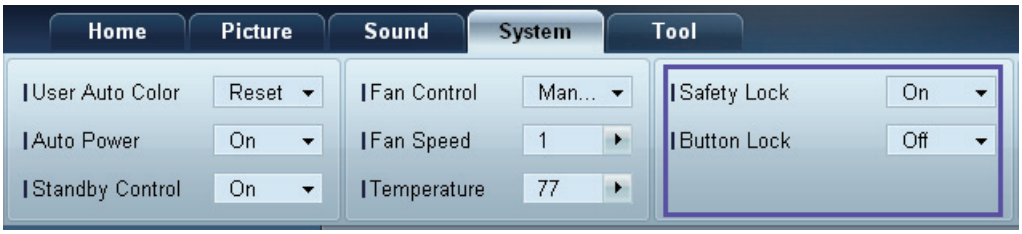
Fan Speed

Configure the fan speed.

Temperature

Detect the internal temperature by specifying the range of temperature.

Security



Safety Lock

Lock the on-screen menus.

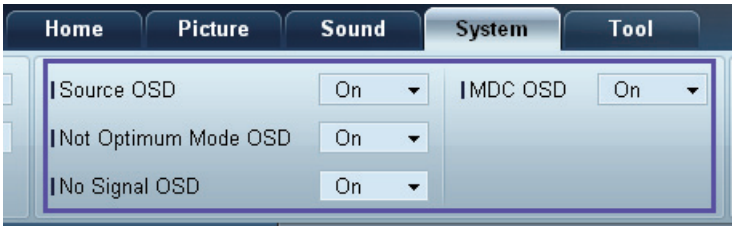
To unlock the menus, set **Safety Lock** to **Off**.

Button Lock

Lock the buttons on the display device.

To unlock the buttons, set **Button Lock** to **Off**.

OSD Display



Source OSD

Select whether to display a message when the **Source** is changed.

Not Optimum Mode OSD

Select whether to display a message when a non-compatible mode is selected.

No Signal OSD

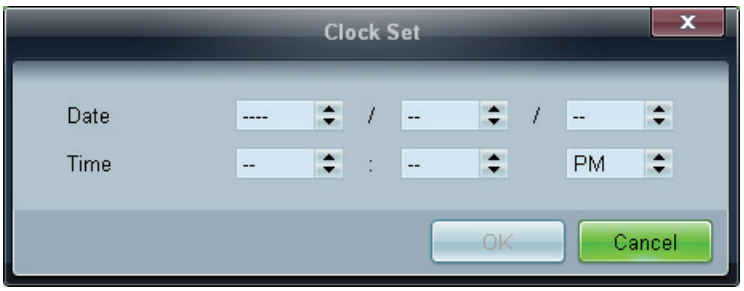
Select whether to display a message when there is no input signal.

MDC OSD

Select whether to display a message when settings are changed by the MDC.

Time

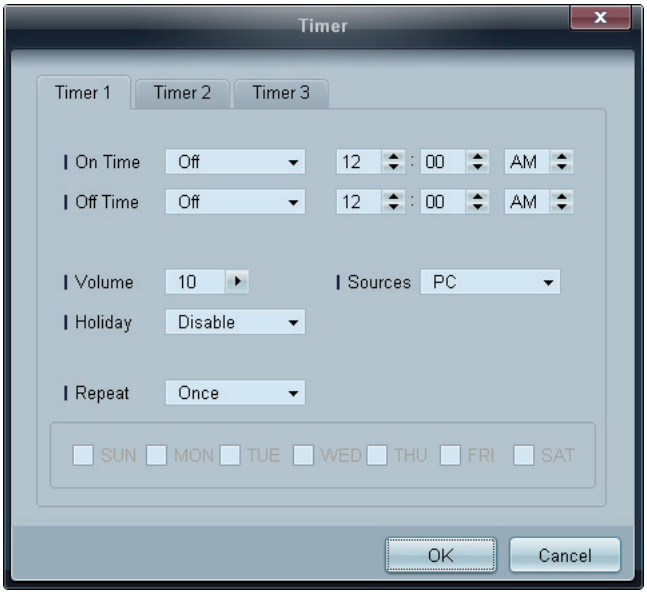
Clock Set



Change the current time on the selected display device according to the time set on a PC.

If the time is not set on the display device, null values will be displayed.

Timer



- **On Time**: Set the time to power on the selected display device.
- **Off Time**: Set the time to power off the selected display device.
- **Volume**: Specify the volume of the display device when it is powered on by **On Time**.
- **Source**: Specify the input source of the display device when it is powered on by **On Time**.
- **Holiday**: The **Holiday Management** settings can be applied to the **Timer**.
- **Repeat** : Specify the period for which you want to repeat the selected **Timer**.

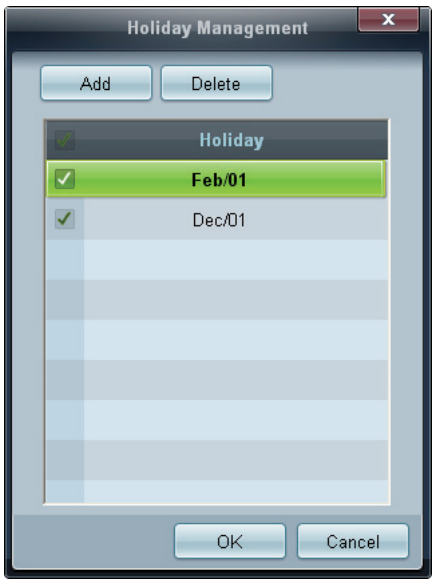
- **Once**: Activate the timer only one time.
- **EveryDay**: Activate the timer every day.
- **Mon~Fri**: Activate the timer from Monday through Friday.
- **Mon~Sat**: Activate the timer from Monday through Saturday.
- **Sat~Sun**: Activate the timer on Saturdays and Sundays.
- **Manual**: Customize days of the week.

The checkboxes to select days of the week below **Repeat** are enabled only if **Manual** is selected.

Holiday Management

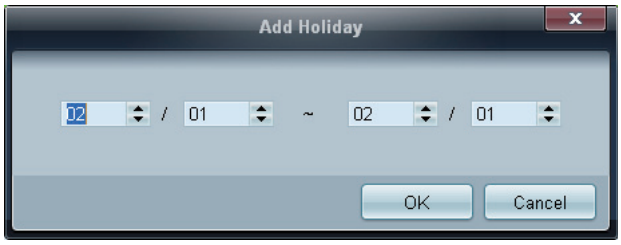
Holiday Management allows you to prevent devices that are set to be powered on by the **Timer** from turning on at a specified date.

The **Holiday Management** function can be enabled or disabled in the **Timer** settings menu.



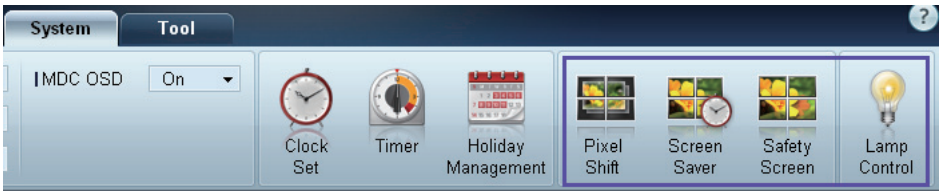
- **Add**: You can specify holidays:

  Click the **Add** button in the **Holiday Management** window.

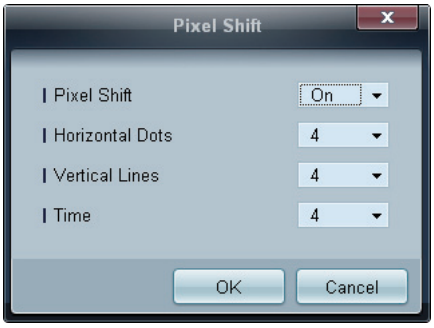


- **Delete**: Delete holidays: check the corresponding checkboxes and click this button.
- List of holidays: View a list of holidays you have added.

Screen Burn Protection

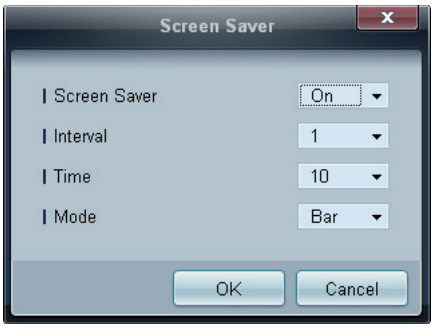


Pixel Shift



Move the screen slightly at specified time intervals to prevent screen burn-in.

Screen Saver



This function prevents screen burn-in when the screen of the selected display device is left idle for an extended period of time.

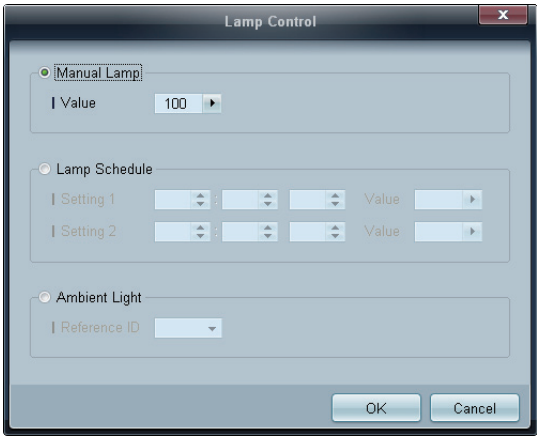
- **Interval**: Set the interval to activate the **Screen Saver**.
- **Mode**: The **Time** setting can vary for each **Mode**.

Safety Screen

The **Safety Screen** function can be used to prevent screen burn-in when a stationary image displays on the screen of a display device for an extended period of time.

Lamp Control

Lamp Control is used to adjust the backlight to reduce power consumption.



Automatically adjust the backlight of the selected display device at a specified time.

If **Manual Lamp Control** is adjusted, **Auto Lamp Control** will automatically switch to **Off**.

Manually adjust the backlight for the selected display.

If **Auto Lamp Control** is adjusted, **Manual Lamp Control** will automatically switch to **Off**.

- **Ambient Light**: **Ambient Light** detects ambient light intensity and automatically adjusts the screen brightness of all the LFDs in the same serial chain.

3.3.12 Tool Settings

1 Security

Panel Control

Turn on or off the screen of a display device.

Remote Control

Enable or disable the remote control.

2 Reset

Reset Picture

Reset the screen settings.

Reset Sound

Reset the sound settings.

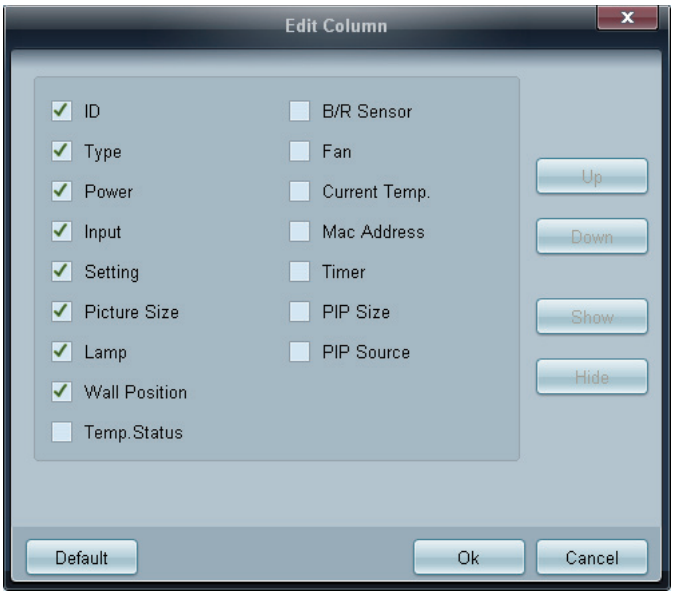
Reset System

Reset the system settings.

Reset All

Reset the screen, sound and system settings at the same time.

3 Edit Column



Select the items you want to display in the list of sets.

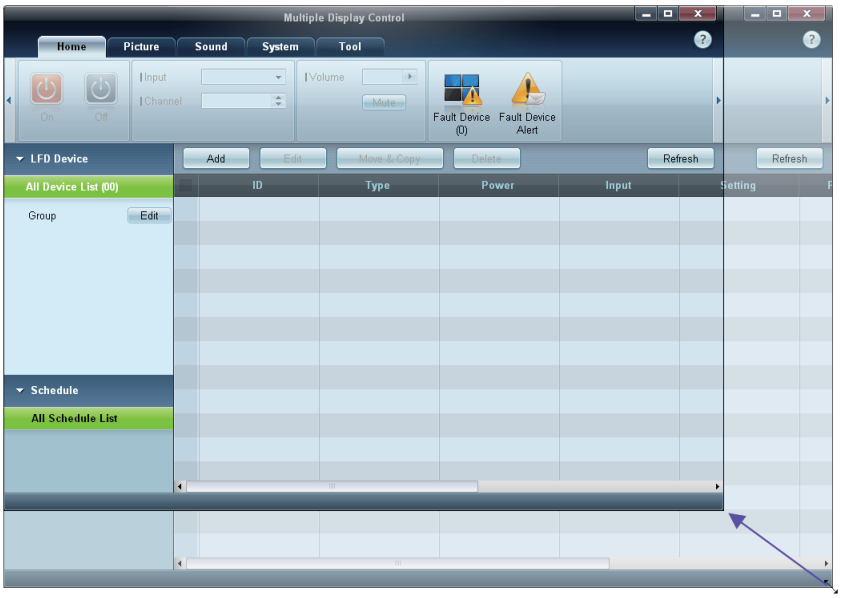
4 Information

View the program information.

3.3.13 Other Functions

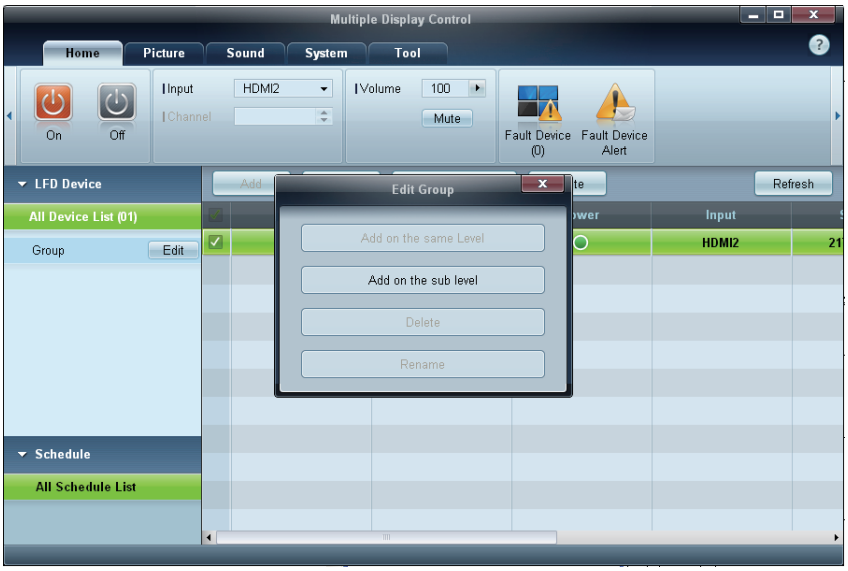
Resizing a Window

Place the mouse pointer on a corner of the program window. An arrow will appear. Move the arrow to customize the size of the program window.



Group Management

Creating Groups



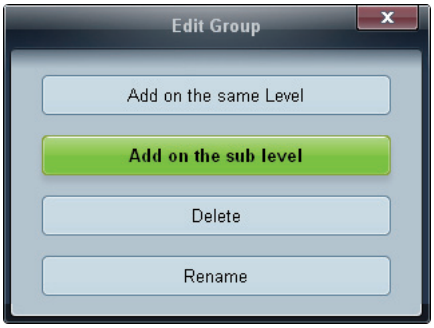
Create groups and manage the list of sets on a group basis.

Duplicate group names cannot be used.

1 Right-click and select **Group>Edit** in the display device list section on the left side of the program window.

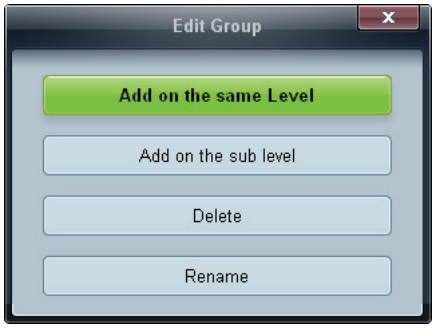
2 In the **Edit Group** window displayed, click **Add on the sub level** or **Add on the same level**.

- **Add on the sub level**: Create a sub-group under the selected group.



The **Add on the same level** button is enabled only if at least one group is created.

- **Add on the same level**: Create a group on the same level as the selected group.



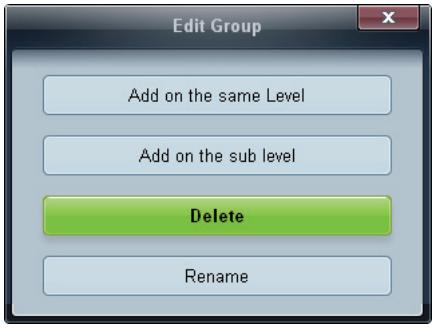
The **Add on the same level** button is enabled only if at least one group is created.

3 Enter the group name.

Deleting Groups

1 Select a group name, and click **Edit**.

2 In the **Edit Group** window displayed, click **Delete**.

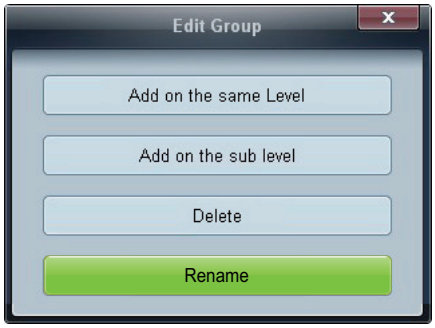


3 Click **Yes**. The group will be deleted.

Renaming Groups

1 Select a group name, and click **Edit**.

2 In the **Edit Group** window displayed, click **Rename**.



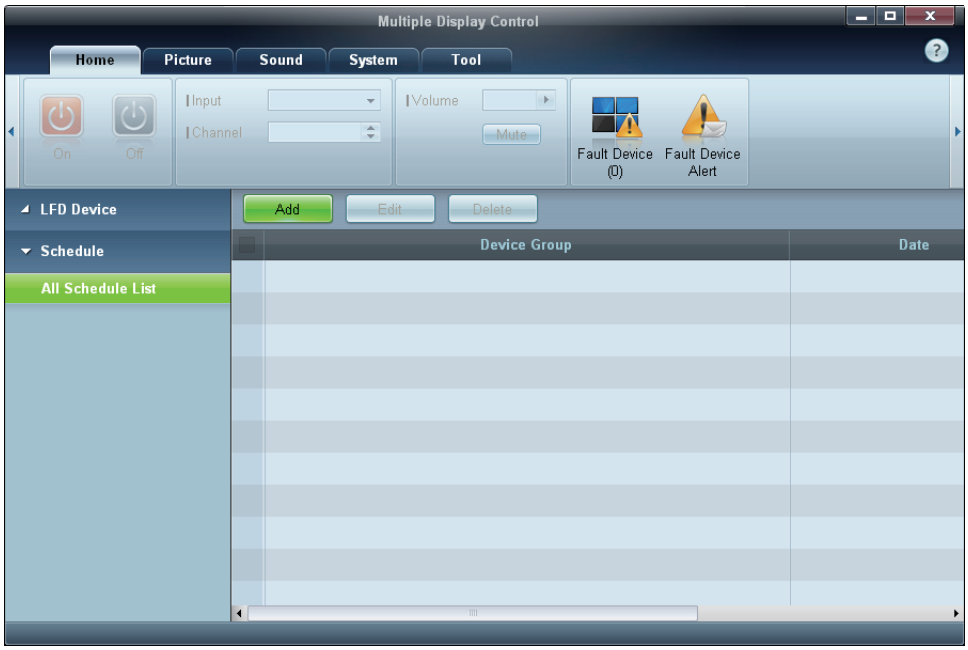
3 If a cursor appears in the old group name, enter a new group name.

Schedule Management

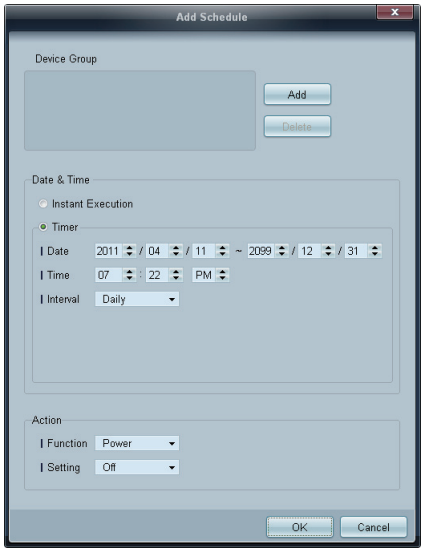
Creating Schedules

Create and register a schedule on a group basis.

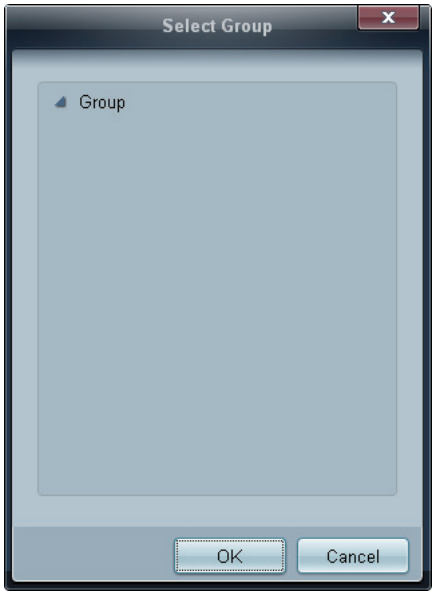
1 Click **All Schedule List** in the schedule section on the left side of the program window. The **Add** button will be enabled in the middle.



2 Click the **Add** button. The **Add Schedule** window will appear.



3 Click **Add** below the **Device Group** item, and select the group you want to add a schedule to.



4 Select **Date&Time/Action** and click **OK**. The schedule will be added and a list of schedules will appear in the set list window.

- **Device Group**: Select a group.
- **Date&Time**
  - **Instant Execution**: Run the schedule immediately.
  - **Timer** Set the date, time and interval to run the schedule.
- **Action**: Select a function that will activate at the specified time and interval.

Schedule Modification

To modify a schedule, select the schedule and click **Edit**.

Deleting a Schedule

To delete a schedule, select the schedule and click **Delete**.

3.3.14 Troubleshooting Guide

Issue		Solution
The display you want to control does not appear on the system information chart.	1.	Check the connection of the RS232C cable (check that the cable is properly connected to appropriate serial port).
	2.	Check that another display with a duplicate **ID** is not connected. Connecting displays with a duplicate **ID** can cause the displays not to be shown due to data collision.
	3.	Check that the display **ID** is within the range of 0 and 99. (Change the ID using the Display menu.) For a display that supports the ID in a range of 0 to 99, the **ID** should be set between 0 and 99.
The display you want to control does not appear on the other Control Info Grids.	Check that the display is powered on. (See the power status in the system information chart.)	
	Ensure you select the input source the display is connected to.	
The following message appears repeatedly. 	Check that the display you want to control is selected.	
Displays power on or off at different time from one another even though **On Time** or **Off Time** is set.	Adjust the time on the PC to synchronize the time between the connected displays.	
The remote control does not work.	The remote control may not work if the RS-232C cable is removed or the program is closed abnormally while the **Remote Control** function is **Disable**. To resolve this, run the program again and set **Remote Control** to **Enable**.	

This program may malfunction sometimes due to a communication problem between the PC and display or electromagnetic waves emitted from nearby electronic devices.

How display properties are shown when multiple displays are used

1. When no display is selected: The default value is displayed.
2. When one display is selected: Settings for the selected display are displayed.
3. When two displays are selected (e.g. in sequence of **ID** 1 and**ID** 3): The settings for **ID** 1 are displayed before the settings for **ID** 3.
4. When the **All**+**Select** checkbox is checked and all displays are selected: The default settings are displayed.

4 Screen Adjustment

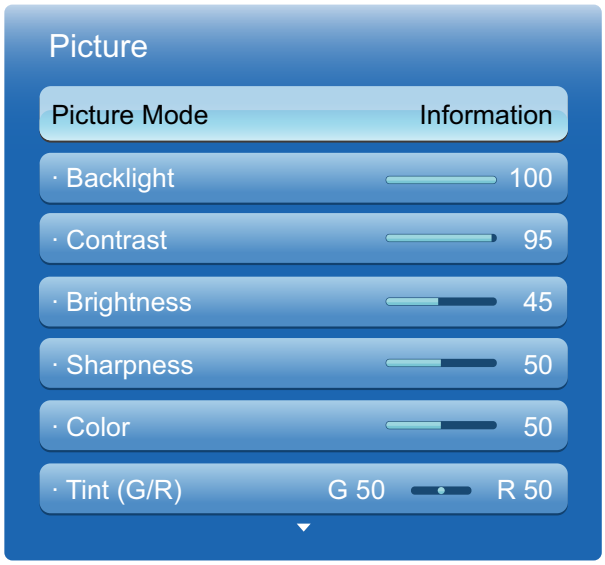
Configure the **Picture** settings (**Brightness**, **Color Tone**, etc.).

The layout of the **Picture** menu options may vary depending on the product.

4.1 Picture Mode

MENU → Picture → Picture Mode → ENTER

Select a picture mode (**Picture Mode**) suitable for the environment where the product will be used. Different **Picture Mode** options are displayed depending on the current input source.



The displayed image may differ depending on the model.

4.1.1 If the input source is PC or DVI

- **Information**: This mode reduces eye fatigue and is suitable for displaying information to the public.
- **Advertisement**: This mode is suitable for displaying video content and indoor/outdoor advertisements.

4.1.2 If the input source is HDMI

- **Dynamic**: This mode is suitable when the ambient light is bright.
- **Standard**: This mode is generally suitable for any environment.
- **Natural**: Suitable for reducing eye strain.
- **Movie**: This mode reduces eye fatigue.

4.2 Backlight / Contrast / Brightness / Sharpness / Color / Tint(G/R)

MENU → Picture → ENTER

Your product has several options for adjusting picture quality. Select an option using the ▲ and ▼ buttons, and then press [↵]. Use the arrow keys to adjust the option value or select an option setting. When done, press [↵].

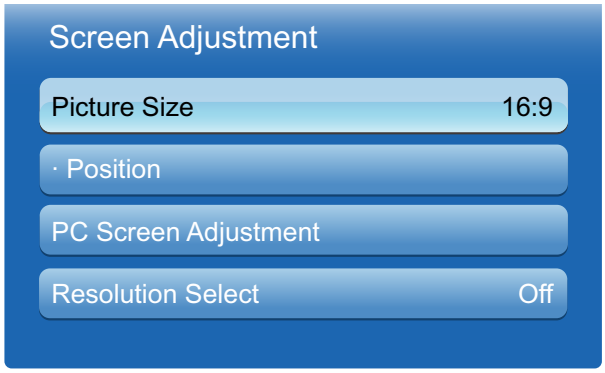
- When you make changes to **Backlight**, **Contrast**, **Brightness**, **Sharpness**, **Color** or **Tint (G/R)**, the OSD will be adjusted accordingly.
- When connecting a **PC**, you can only make changes to **Backlight**, **Contrast**, **Brightness**, and **Sharpness**.
- You can adjust and store settings for each external device you have connected to an input on the product.
- Lowering picture brightness reduces power consumption.

4.3 Screen Adjustment

MENU → Picture → Screen Adjustment → ENTER

Screen Adjustment provides various picture size and aspect ratio options. Select an option using the ▲ and ▼ buttons, and the press [↵]. Use the arrow keys to select an option in the sub-menu, and then press [↵].

Different **Screen Adjustment** options are displayed depending on the current input source:



The displayed image may differ depending on the model.

4.3.1 Picture Size

If you have a cable box or satellite receiver, it may have its own set of screen sizes as well. However, we highly recommend you use your product **16:9** mode most of the time.

- **16:9**: Sets the picture to 16:9 wide mode.
- **Zoom1**: Use for moderate magnification. Cuts off the top and sides.
- **Zoom2**: Use for a stronger magnification.
- **Smart View 1**: Reduces the 16:9 picture by 50%.

  Smart View 1 is enabled only in **HDMI** mode.
- **Smart View 2**: Reduces the 16:9 picture by 25%.

  Smart View 2 is enabled only in **HDMI** mode.
- **4:3**: Sets the picture to basic (4:3) mode.

  Do not set your product to 4:3 format for a long time. The borders displayed on the left and right, or top and bottom of the screen may cause image retention (screen burn) which is not covered by the warranty.
- **Screen Fit**: Displays the full image without any cut-off when HDMI (720p / 1080i / 1080p) or signals are inputted.
- **Custom**: Changes the resolution to suit the user's preferences.

  You can adjust and store settings for each external device you have connected to an input on the product.
- **Original ratio**: If the input source is **PC**, **DVI**, **HDMI**(PC connection), the video will display in the original aspect ratio.

  Available ports may differ depending on the model.(page 25)

Picture Sizes available by Input Source

Input Source	Picture Size
HDMI (720p, 1080i, 1080p)	**16:9**, **4:3**, **Screen Fit**, **Smart View 1**, **Smart View 2**, **Custom**
PC, DVI, HDMI (when a PC is connected)	**16:9**, **4:3**, **Original ratio**

4.3.2 Position

Adjusts the picture position. **Position** is only available if **Picture Size** is set to **Zoom1**, **Zoom2**, **Screen fit** or **Custom**.

To use the Position function after selecting Zoom1, Zoom2 follow these steps.

1. Press the ▼ button to select **Position**.
2. Press the [↵] button.
3. Press the ▲ or ▼ button to move the picture up or down.
4. Press the [↵] button.
5. Select **Close** by pressing the ▲ and ▼ buttons sequentially. To reset the picture position, press **Reset**.

To use the Position function after selecting Screen Fit in HDMI (1080i/1080p) or Custom, follow these steps.

1. Press the ▼ button to select **Position**.
2. Press the [↵] button.
3. Press the ▲/▼/◀/▶ button to move the picture.
4. Press the [↵] button.
5. Select **Close** by pressing the ▲ and ▼ buttons sequentially.

> If you want to reset the picture to its original position, select **Reset** in the **Position** screen. The picture will be set to its default position.

4.3.3 PC Screen Adjustment

> Available in **PC** mode only.

Coarse / **Fine**: Removes or reduces picture noise. If the noise is not removed by Fine-tuning alone, use the **Coarse** function to adjust the frequency as best as possible (**Coarse**) and Fine-tune again. After the noise has been reduced, re-adjust the picture so that it is aligned with the center of screen.

Position: To adjust the PC's screen position if it is not centered or does not fit the product screen. Press the ▲ or ▼ button to adjust the Vertical Position. Press the ◀ or ▶ button to adjust the Horizontal Position.

Image Reset: Resets the image to the default settings.

4.3.4 Resolution Select

If the picture is not normal even when the resolution of the graphics card is one of the following, you can optimize the picture quality by selecting the same resolution for the product as the PC using this menu.

Available resolutions: **Off** / **1024 x 768** / **1280 x 768** / **1360 x 768** / **1366 x 768**

> The **Resolution Select** option is only enabled when the input source is **PC**.

4.4 Auto Adjustment

MENU → Picture → Auto Adjustment → ENTER

Adjust frequency values/positions and fine tune the settings automatically.

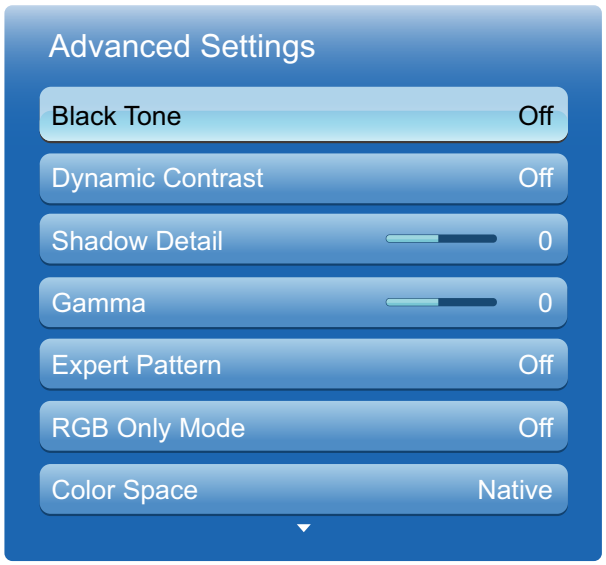
This option is available when the input source is PC.

4.5 Advanced Settings

MENU → Picture → Advanced Settings → ENTER

All Advanced Settings are available in the Standard and Movie modes. To use, select an option using the up and down arrow keys, and then press . Use the arrow keys to change the value or setting, and then press [ ]. Use the arrow keys to change the value or setting, and then press .

In PC mode, you can only make changes to Gamma and White Balance.



The displayed image may differ depending on the model.

4.5.1 Black Tone

Select the black level to adjust the screen depth.

- Off / Dark / Darker / Darkest

4.5.2 Dynamic Contrast

Adjust the screen contrast.

- **Off** / **Low** / **Medium** / **High**

4.5.3 Shadow Detail

Increase the brightness of dark images.

4.5.4 Gamma

Adjust the primary color intensity.

4.5.5 Expert Pattern

Use the **Expert Pattern** function to calibrate the picture. If the OSD menu disappears or a menu other than the Picture menu is opened, the product saves the calibration and the **Expert Pattern** screen disappears.

- **Off**

  Turns the **Expert Pattern** function off.
- **Pattern1**

  This test screen demonstrates the effect of the display settings on shades of grey and black.
- **Pattern2**

  This test screen demonstrates the effect of the display settings on color.

- After selecting **Pattern1** or **Pattern2**, you can adjust any of the advanced settings for desired effect.
- While the **Expert Pattern** is running, sound is not outputted.
- Only enabled on **HDMI** modes.

4.5.6 RGB Only Mode

Displays the **Red**, **Green** and **Blue** color for making fine adjustments to the hue and saturation.

- **Off** / **Red** / **Green** / **Blue**

4.5.7 Color Space

Adjusts the range and variety of color (the color space) available to create images.

- **Auto** / **Native** / **Custom**

To adjust **Color**, **Red**, **Green**, **Blue** and **Reset**, set **Color Space** to **Custom**.

4.5.8 White Balance

Adjust the colour temperature for a more natural picture.

- **R-Offset** / **G-Offset** / **B-Offset**: Adjust each color (red, green, blue) darkness.
- **R-Gain** / **G-Gain** / **B-Gain**: Adjust each color (red, green, blue) brightness.
- **Reset**: Resets the **White Balance** to its default settings.

4.5.9 10p White Balance (Off / On)

Controls the white balance in 10 point interval by adjusting the red, green, and blue brightness.

- **Interval**: Select interval to adjust.
- **Red**: Adjust the red level.
- **Green**: Adjust the green level.
- **Blue**: Adjust the blue level.
- **Reset**: Resets the **10p White Balance** to its default settings.

- Available when the **Picture Mode** is set to **Movie** and when the external input is set to all input.
- Some external devices may not support this function.

4.5.10 Flesh Tone

Emphasize pink “Flesh Tone.”

4.5.11 Edge Enhancement (Off / On)

Emphasize object boundaries.

4.5.12 Motion Lighting (Off / On)

Reduces power consumption by reducing screen brightness when the picture on the screen is in motion.

4.5.13 LED Motion Plus (Off / On)

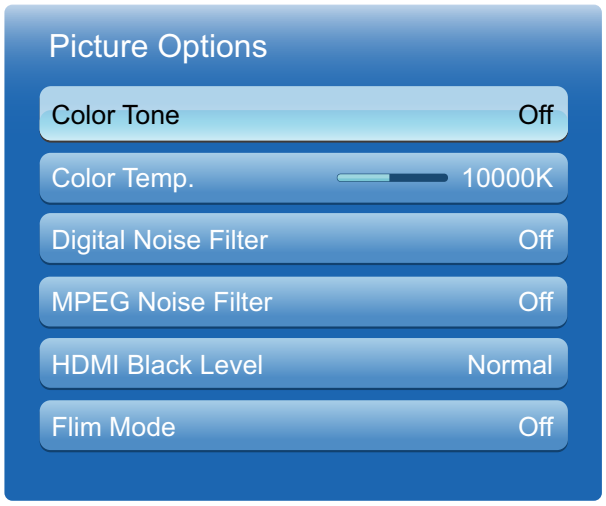
Removes blur and judder from scenes with larger amounts of rapid movement to provide a clearer picture.

4.6 Picture Options

MENU → Picture → Picture Options → ENTER

Select an option using the up and down arrow keys, and the press [↵]. Use the arrow keys to change the setting, and then press [↵].

When connecting a PC, you can only make changes to the **Color Tone**.



The displayed image may differ depending on the model.

4.6.1 Color Tone

- **Off** / **Cool** / **Standard** / **Warm1** / **Warm2**

- **Warm1** or **Warm2** will be deactivated when the **Picture Mode** is **Dynamic**.
- You can adjust and store settings for each external device connected to an input on the product.

4.6.2 Color Temp.

Adjust the color temperature (**Red**/**Green**/**Blue**). (Range: 3000K–15000K)

This function is only available when **Color Tone** is set to **Off**.

4.6.3 Digital Noise Filter

If the broadcast signal received by your product is weak, you can activate the **Digital Noise Filter** feature to reduce any static and ghosting that may appear on the screen.

- **Off** / **Low** / **Medium** / **High** / **Auto**

When the signal is weak, try all the options until the the product displays the best picture.

4.6.4 MPEG Noise Filter

Reduces MPEG noise to provide improved picture quality.

- Off / Low / Medium / High / Auto

4.6.5 HDMI Black Level

Lets you adjust the screen depth by selecting a black level.

- Normal / Low

Available only in HDMI mode.

4.6.6 Film Mode

Sets the product to automatically sense and process film signals from all sources and adjust the picture for optimum quality.

- Off / Auto1 / Auto2

Available only in HDMI mode.

4.7 Reset Picture

MENU → Picture → Reset Picture → ENTER

Resets your current picture mode to its default settings.

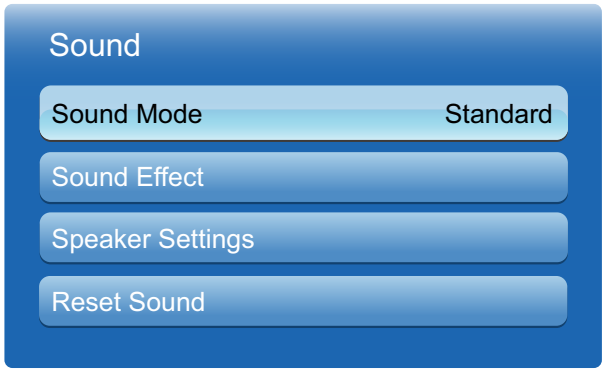
5 Sound Adjustment

Configure the sound (**Sound**) settings for the product.

5.1 Sound Mode

MENU → Sound → Sound Mode → ENTER

Use the up and down arrow keys to select an option, and then press [].



The displayed image may differ depending on the model.

- **Standard**: Selects the normal sound mode.
- **Music**: Emphasizes music over voices.
- **Movie**: Provides the best sound for movies.
- **Clear Voice**: Emphasizes voices over other sounds.
- **Amplify**: Increase the intensity of high-frequency sound to allow a better listening experience for the hearing impaired.

If **Speaker Select** is set to **External**, **Sound Mode** is disabled.

5.2 Sound Effect

MENU → Sound → Sound Effect → ENTER

- If Speaker Select is set to External, Sound Effect is disabled.
- Available only when Sound Mode is set to Standard.

- SRS TruSurround HD (Off / On)

  This function provides a virtual 5.1 channel surround sound experience through a pair of speakers using HRTF(Head Related Transfer Function) technology.

- SRS TruDialog (Off / On)

  This function allows you to increase the intensity of a voice over background music or sound effectsso that dialog can be heard more clearly.

- SRS CS Headphone (Off / On)

  You can hear virtual 5.1ch surround sound over the headphones.

  This function is available only when the headphones is connected.

- Equalizer

  The Equalizer displays a series of sliders. Use the up and down arrow keys to select a slider. Use the left and right arrow keys to change the slider's value. To Reset the Equalizer, select Reset and press [↵], then select YES and press [↵]. To exit, select Close, and then press [↵].

  Equalizer is available in the standard sound mode only.

  - Balance L/R: Adjusts the balance between the right and left speaker.
  - 100Hz / 300Hz / 1kHz / 3kHz / 10kHz (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.
  - Reset: Resets the equalizer to its default settings.

5.3 Speaker Settings

MENU → Sound → Speaker Settings → ENTER

- **Speaker Select** (**External** / **Internal**)

  If you are listening to the sound track of a broadcast or movie through an external receiver, you may hear a sound echo caused by the difference in decoding speed between the product speakers and the speakers attached to your audio receiver. If this occurs, set the product to **External**.

  - When you set **Speaker Select** to **External**, the product speakers are turned off. You will hear sound through the external speakers only. When the **Speaker Select** is set to **Internal**, both the product speakers and the external speakers are on. You will hear sound through both.
  - If there is no video signal, both the product speakers and the external speakers will be mute.

- **Auto Volume** (**Off** / **Normal** / **Night**)

  Normal equalizes the volume level on each channel, so that when you change channels, the volume level is the same.

  Night equalizes and decrease the volume level on each channel, so each channel is quieter. **Night** is useful at night, when you may want to keep the volume low.

  To use the volume control of a connected source device, set **Auto Volume** to **Off**. A change to the volume control of the connected source device may not be applied if **Auto Volume** is set to **Normal** or **Night**.

5.4 Reset Sound

MENU → Sound → Reset Sound → ENTER

Reset all sound settings to the factory defaults. Select **Reset Sound**, press **ENTER**[], select **Yes** in the pop-up, and then press **ENTER**[] again.

6.1 MagicInfo Lite

MENU → Media → MagicInfo Lite → ENTER[↵]

Press the **MagicInfo Lite** button on the remote control.

The displayed image may differ depending on the model.

MagicInfo Lite Player allows you to play content (image, video, document files) at a desired time.

You can play content saved in internal memory or USB memory. You can also play content via MagicInfo Lite Server after connecting to a network.

For further details about how to use **MagicInfo Lite Server**, refer to the **MagicInfo Lite Server** user manual.

6.2 Videos

MENU → Media → Videos → ENTER[↵]

Connecting a USB Device

1 Turn on your product.

2 Connect a USB device containing photo, music and/or movie files to the USB port on the back or side panel of the product.

3 When a USB device is connected to the product, the **Connected Device** screen appears. Select a connected device, and then press [↵].

6.2.1 Playing a Video

1 Press the ◀/▶/▲/▼ button to select the desired video in the file list.

2 Press the [↵] button or [▶](Play) button.

- The file name appears on the top with its playing time.
- If video time information is unknown, the playing time and progress bar are not displayed.
- During video playback, you can search using the ◀ and ▶ buttons.
- You can use the [◀◀](REW), [▶▶](FF), Pause, Stop, and Play buttons on the bottom of your remote during playback.
- Press the **RETURN** button to exit the movie.
- Pressing the **MENU** button when content from a USB device is playing will stop the playback and return you to the previous input mode.

Supported Video Subitle Formats (for language subtiles, etc.)

Name	File extension	Format
MPEG-4 time-based text	.ttxt	XML
SAMI	smi	HTML
SubRip	.srt	string-based
SubViewer	.sub	string-based
Micro DVD	.sub or .txt	string-based

Supported Video Formats

File Extension	Container	Video Codec	Resolution	Frame rate(fps)	Bit rate (Mbps)	Audio Codec
*.avi *.mkv	AVI MKV	DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	8	MP3 / AC3/ LPCM / ADPCM / DTS Core
		H.264 BP / MP / HP	1920x1080	6 ~ 30	25	
		MPEG4 SP / ASP	1920x1080	6 ~ 30	8	
		Motion JPEG	1920x1080	6 ~ 30	8	
*.asf	ASF	DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	8	MP3 / AC3/ LPCM / ADPCM / WMA
		H.264 BP / MP / HP	1920x1080	6 ~ 30	25	
		MPEG4 SP / ASP	1920x1080	6 ~ 30	8	
		Motion JPEG	1920x1080	6 ~ 30	8	
*.wmv	ASF	Window Media Video v9	1920x1080	6 ~ 30	25	WMA
*.mp4	MP4	H.264 BP / MP / HP	1920x1080	6 ~ 30	25	MP3 / ADPCM / AAC
		MPEG4 SP / ASP	1920x1080	6 ~ 30	8	
*.3gp	3GPP	H.264 BP / MP / HP	1920x1080	6 ~ 30	25	ADPCM / AAC / HE-AAC
		HEMPEG4SP / ASP	1920x1080	6 ~ 30	8	
*.vro	VRO VOB	MPEG1	352x288	24 / 25 / 30	30	AC3 / MPEG / LPCM
		MPEG2	1920x1080	24 / 25 / 30	30	
*.mpg *.mpeg	PS	MPEG1	352x288	24 / 25 / 30	30	AC3 / MPEG / LPCM / AAC
		MPEG2	1920x1080	24 / 25 / 30	30	
		H.264	1920x1080	6 ~ 30	25	
*.ts *.tp *.trp	TS	MPEG2	1920x1080	24 / 25 / 30	30	AC3 / AAC / MP3 / DD+ / HE-AAC
		H.264	1920x1080	6 ~ 30	25	
		VC1	1920x1080	6 ~ 30	25	

- Video content will not play, or not play correctly, if there is an error in the content or the container.

- Sound or video may not work if the contents have a standard bitrate/frame rate above the compatible Frame/sec listed in the table above.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- You may experience file stuttering while playing a video through a network connection.
- Video content can not be played, if there are many contents in one file.
- When you play video over a network connection, the video may not be played smoothly.
- The menu may take longer to appear if the video's bit rate exceeds 10Mbps.
- Some USB/digital camera devices may not be compatible with the player.

Video Decoder	Audio Decoder
Supports up to H.264, Level 4.1 H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported. For MPEG4 SP, ASP • Below 1280 x 720: 60 frame max • Above 1280 x 720: 30 frame max GMC 2 over is not supported.	Supports up to WMA 7, 8, 9, STD WMA 9 PRO does not support 2 channel excess multi channel or lossless audio. WMA sampling rate 22050Hz mono is not supported. RealAudio 10 lossless is not supported.

Using the Play Continuously Function (Resume Play)

If you exit a movie when it is playing, you can play the movie later from the point where you stopped it.

The **Resume** function does not support multiple users. (It will only memorize the point where the most recent user stopped playing.)

1. Select the movie file you stopped and want to resume by pressing the ◀ or ▶ button.
2. Press the [▶] (Play) or [↵] button.
3. Press Resume Icon on control panel for resume. The Movie will begin to play from where you stopped it.

Resume is only available when you resume playing a movie you had stopped.

Using the Scene Search function

Scene Search divides a video into five chapters during playback. You can then restart playback from the chapter you select.

If the index information is damaged or unsupported, you will not be able to use the **Scene Search** function.

1. Select the movie file you want to play from the file list section.
2. Press the [▶] (play) or [↵] button.

3 Press the **TOOLS** button, and then press the ◀ or ▶ button to select **Scene Search**. A pop up screen appears.

4 Press the ◀ or ▶ button to select a chapter you want to view. Playback will start from the chapter you selected.

6.3 Photos

MENU → Media → Photos → ENTER[↵]

Connecting a USB Device

1 Turn on your product.

2 Connect a USB device containing photo, music and/or movie files to the USB port on the back or side panel of the product.

3 When a USB device is connected to the product, the **Connected Device** screen appears. Select a connected device, and then press [↵].

6.3.1 Viewing a Photo (or Slide Show)

1 Press the ◀/▶/▲/▼ button to select the desired file in the file list.

2 Press the [↵] button.

- To view files manually, one at a time, press the left or right arrow buttons.
- To start the slide show, press the [▶] (Play) button when the file you selected is displayed.
- During the slide show, all files in the file list are displayed in order, starting from the file you selected.

- When you press the [▶] (Play) button in the file list, the slide show will start immediately.
- During a **Slide Show**, press the **TOOLS** button to access additional functions such as **Slide Show Speed**, **Background Music**, **Zoom**, and **Rotate**.
- You can add background music to a slide show if you have music files on your USB device or PC by setting **Background Music** to **On** in the **Tools** menu, and then selecting music files to play.
- The **Background Music** cannot be changed until the BGM has finished loading.
- You can use the Pause, Stop, and Play buttons on the bottom of your remote during a slide show.
- When you press the Stop or Return button, the slide show stops and the main photo screen re-appears.
- Pressing the **MENU** button when content from a USB device is playing will stop the playback and return you to the previous input mode.

6.4 Music

MENU → Media → Music → ENTER[↵]

Connecting a USB Device

1 Turn on your product.

2 Connect a USB device containing photo, music and/or movie files to the USB port on the back or side panel of the product.

3 When a USB device is connected to the product, the **Connected Device** screen appears. Select a connected device, and then press [↵].

6.4.1 Playing Music

1 Press the ◀/▶/▲/▼ button to select the desired music file in the file list.

2 Press the [↵] button or [▶](Play) button.

- When the music is playing, you can search using the [◀◀] (REW) and [▶▶] (FF) button.

- If the sound is abnormal when you play MP3 files, adjust the Equalizer in the Sound menu. (An over-modulated MP3 file may cause a sound problem.)
- Pressing the **MENU** button when content from a USB device is playing will stop the playback and return you to the previous input mode.

Creating My Playlist

1 On the **Music** screen, press the ◀/▶/▲/▼ button to select **Edit Mode**, and then press the [↵] button.

- A check box appears to the left of the files.

2 Press the ◀/▶/▲/▼ button to select the tracks you want to add, and then press the [↵] button.

- A check appears in the check box.

3 Repeat Step 2 to select additional tracks.

- To select all the files in the current page, select **Select All** at the top of the page, and then press [↵].

4 Press the ◀/▶/▲/▼ button to select **Add to My Playlist**.

- Note that selecting **Clear My Playlist** will return **My Playlist** to the default playlist and remove all the tracks you added.

5 Press the [↵] button. The message "**Selected items were added to My Playlist.**" is displayed.

6 The newly created or updated playlist will be in the main **Music** page.

Playing My Playlist

Select the **My Playlist** folder and it will play automatically. Press the ▲ or ▼ button to play a different music file within the play list.

To delete a file from **My Playlist**, select the recycle bin icon next to the file you want to delete by using the direction buttons, and then press [↵]. The file will be deleted from **My Playlist**.

Playing Selected Music Files

1. On the **Music** screen, press the ◀/▶/▲/▼ button to select **Edit Mode** on the far right side of the screen, and then press the [↵] button.
2. Press the ◀/▶/▲/▼ button to select the desired music file in the file list, and then [↵] button.
   - The ✓ mark appears to the left of the selected files.
3. Repeat Step 2 to select additional tracks.
   - To select all the files in the current page, select **Select All** at the top.
   - To cancel a selection, press the [↵] button again.
4. Press the ◀/▶/▲/▼ button to select **Play** at the bottom of the screen, and then press [↵]. The selected music files play.

6.5 Videos / Photos / Music - Additional Functions

6.5.1 Sorting the file lists

To sort files in the file lists, select the (**Sorting**) icon in the top right of the screen by using the ◀/▶/▲/▼ button. Then, press the [↵] button. The checks below indicate which media the sort criteria apply to.

Sort Criteria	Operation	Videos	Photos	Music
Folder view	Displays the whole folder. You can view the file name and thumbnail by selecting the folder.	✓	✓	✓
Title	Sorts and displays the file title in Symbol/ Number/Alphabet/Special order.	✓	✓	✓
Latest Date	Sorts and shows files by the latest date.	✓	✓	
Earliest Date	Sorts and shows files by the earliest date.	✓	✓	
Monthly	Sorts and shows photo files by month.		✓	

Sort Criteria	Operation	Videos	Photos	Music
Artist	Sorts the music file by artist in alphabetical order.			✓
Album	Sorts the music file by album in alphabetical order.			✓
Genre	Sorts music files by the Genre.			✓

6.5.2 Videos/Photos/Music Play Option menu

When playing video or photo files, you can press the **TOOLS** button to display an Options menu.

Below are a series of tables listing the options available and the media each option applies to.

Option Name	Operations	Videos	Photos	Music
List	Return to the file list.	✓	✓	✓
Play / Pause	You can start or stop. Alternatively, the ▶ (Play) or ❚❚ (Pause) button on the remote can be used.	✓		✓
Previous / Next	Go to previous / next photo file.		✓	
Shuffle	You can play the music sequentially or randomly.			✓
Resume	You can restart a movie file from where you stopped it.	✓		
Scene Search	You can use the Scene Search function during playback to view or start a movie from the scene of your choice.	✓		
Title Search	You can move directly to another Title.	✓		
Time Search	You can search the movie using ◀ and ▶ buttons at intervals of 1 minute.	✓		
Subtitle	You can view a subtitle. You can select a specific language if the subtitle file contains multiple languages.	✓		
Repeat Mode	You can play movie and music files repeatedly.	✓		✓
Picture Size	You can adjust the picture size to your preference.	✓		
Picture Mode	You can change the Picture Mode.	✓	✓	

Option Name	Operations	Videos	Photos	Music
Sound Mode	You can change the Sound Mode.	✓	✓	✓
Audio Language	You can enjoy video in one of supported languages. The function is enabled only when you play stream-type files which support multiple audio formats.	✓		
Subtitle Setting	Displays the Subtitle Setting. You can set up a subtitle option.	✓		
Start Slide Show / Stop Slide Show	You can start or stop a slide show. Alternatively, use the ▶ or ⏸ button on the remote.		✓	
Slide Show Speed	You can select the slide show speed during the slide show. Alternatively, use the ◀◀ or ▶▶ button on the remote.		✓	
Slide Show Effect	You can set various slide show effects.		✓	
Background Music On / Off	You can start or stop background music.		✓	
Background Music Setting	You can set and select background music when watching a photo file or slide show.		✓	
Zoom	You can zoom into images in full screen mode.		✓	
Rotate	You can rotate images.		✓	

- Pressing the **INFO** button while a device name is selected will display information about the selected device.
- Pressing the **INFO** button while a file is selected will display information about the selected file.

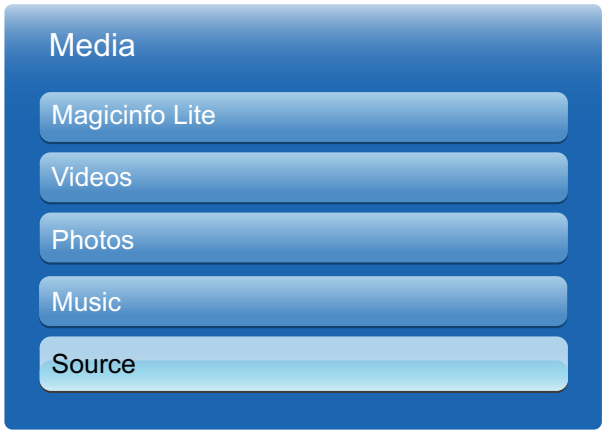
6.6 Source

MENU → Media → Source → ENTER[↵]

Source allows you to select a variety of sources and change source device names.

6.6.1 Source

You can display the screen of a source device connected to the product. Select a source from Source List to display the screen of the selected source.



The displayed image may differ depending on the model.

The input source can also be changed by using the SOURCE button on the remote control.

The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

6.6.2 Edit Name

MENU → Media → Source → TOOLS → Edit Name → ENTER[↵]

You can rename a connected source device.

- Sometimes the screen will not display properly unless the name of a source device is specified in Edit Name. In addition, it is best to rename the source device in Edit Name to obtain optimal picture quality.

  The list can include the following source devices. Source devices on the list differ depending on the selected source.

  - VCR / DVD / Cable STB / Satellite STB / PVR STB / AV Receiver / Game / Camcorder / PC / DVI PC / DVI Devices / TV / IPTV / Blu-ray / HD DVD / DMA

Available settings in the Picture menu depend on the current source and settings made in Edit Name.

- When connecting a PC to the **HDMI IN** port with HDMI cable, you should set the product to **PC** mode under **Edit Name**.
- When connecting a PC to the **HDMI IN** port with HDMI to DVI cable, you should set the product to **DVI PC** mode under **Edit Name**.
- When connecting an AV devices to the **HDMI IN** port with HDMI to DVI cable, you should set the product to **DVI Devices** mode under **Edit Name**.

6.6.3 Information

MENU → Media → Source → TOOLS → Information → ENTER[↵]

You can see detailed information about the selected external device.

6.6.4 Refresh

MENU → Media → Source → TOOLS → Refresh → ENTER[↵]

In the **Source**, If the external devices are not displayed, press the **TOOLS** button to select **Refresh**. Search for connected devices.

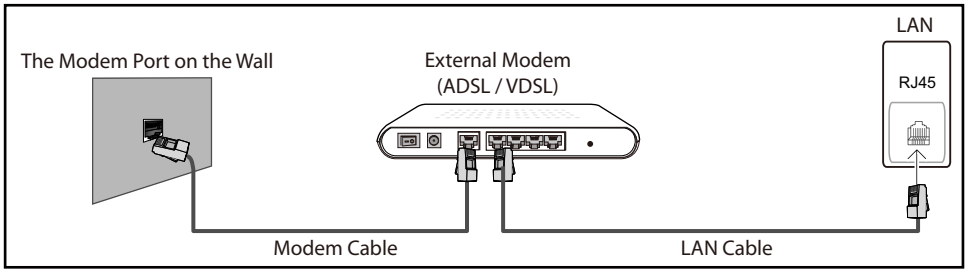
7 Network

7.1 Network Settings

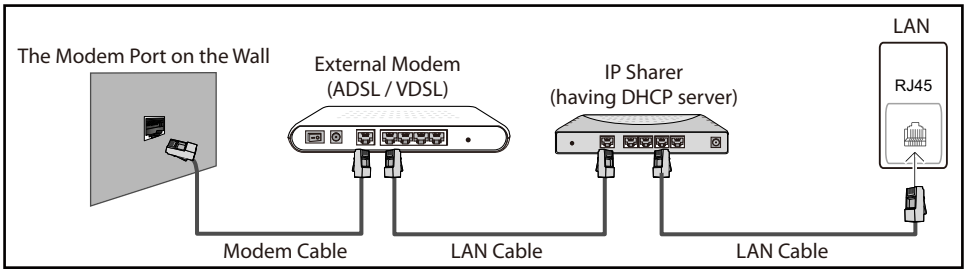
7.1.1 Connecting to a Wired Network

There are three ways to attach your product to your LAN using cable.

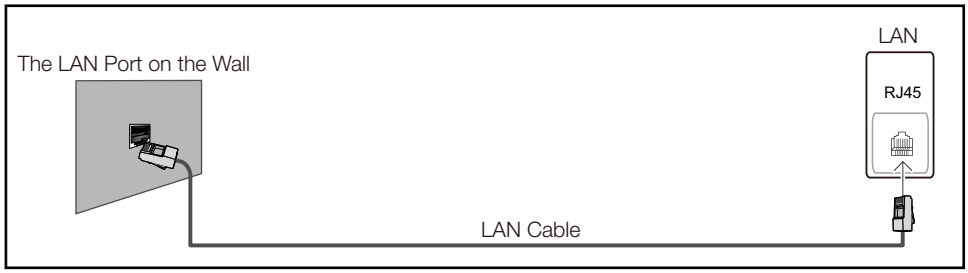
- You can attach your product to your LAN by connecting the LAN port on the back of your product to an external modem using a LAN cable. See the diagram below.



- You can attach your product to your LAN by connecting the LAN port on the back of your product to an IP Sharer which is connected to an external modem. Use LAN cable for the connection. See the diagram below.



- Depending on how your network is configured, you may be able to attach your product to your LAN by connecting the LAN port on the back of your product directly to a network wall outlet using a LAN cable. See the diagram below. Note that the wall outlet is attached to a modem or router elsewhere in your house.



- If you have a Dynamic Network, you should use an ADSL modem or router that supports the Dynamic Host Configuration Protocol (DHCP). Modems and routers that support DHCP automatically provide the IP address, subnet mask, gateway, and DNS values your product needs to

access the Internet so you do not have to enter them manually. Most home networks are Dynamic Networks.

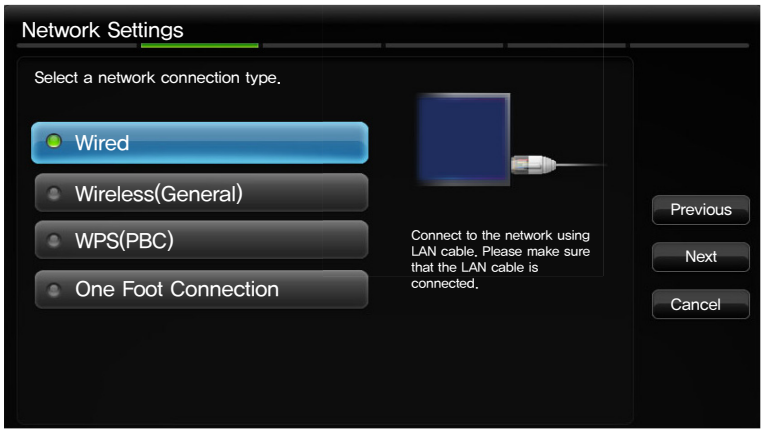
Some networks require a Static IP address. If your network requires a Static IP address, you must enter the IP address, subnet mask, gateway, and DNS values manually on your product Cable Setup Screen when you set up the network connection. To get the IP address, subnet mask, gateway, and DNS values, contact your Internet Service Provider (ISP). If you have a Windows computer, you can also get these values through your computer.

You can use ADSL modems that support DHCP if your network requires a Static IP address. ADSL modems that support DHCP also let you use Static IP addresses.

7.1.2 Wired Network Settings

MENU → Network → Network Settings → ENTER

Set the network connection to use Internet services such as perform software upgrades.



The displayed image may differ depending on the model.

Automatic Network Setup

Use the Automatic **Network Settings** when connecting your product to a network that supports DHCP. To set up your product cable network connection automatically, follow these steps.

How to set up automatically

1. Go to the **Network Settings** screen.
2. Select **Wired**, press [↵], and then press [↵] again.
3. The network test screen appears and verifies the network connection. When the connection has been verified, the "**Internet is connected successfully.**" message appears.

- If the connection process fails, check the LAN port connection.

- If the automatic process cannot find the network connection values or if you want to set the connection manually, go to the next secton, **Manual Network Setup**.

Manual Network Setup

Use the Manual Network Setup when connecting your product to a network that requires a Static IP address.

Getting the Network Connection Values

To view the Network connection values on most Windows computers, follow these steps.

1. Right click the Network icon on the bottom right of the screen.
2. In the pop-up menu that appears, click **Status**.
3. On the dialog that appears, click the **Support** tab.
4. On the **Support** Tab, click the Details button. The Network connection values are displayed.

How to set up manually

To set up your product cable network connection manually, follow these steps.

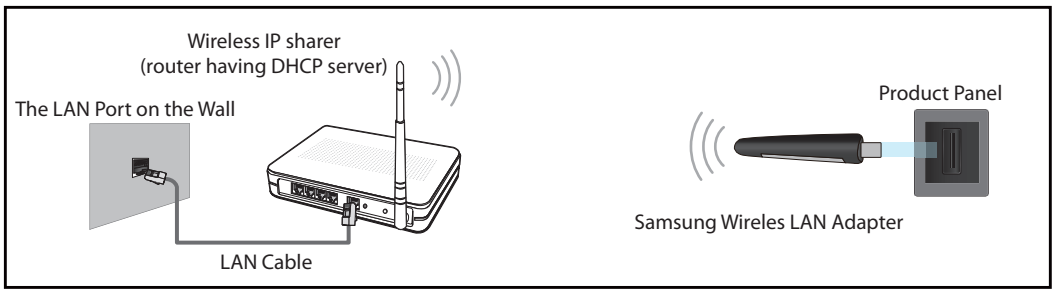
1. Go to the **Network Settings** screen.
2. Select **Wired**, press [↵], and then press [↵] again. The network test screen appears and the verification process starts.
3. Press [↵]. The verification process stops. Select **IP Settings** on network connection screen. The **IP Settings** screen appears.
4. Select the field at the top, press [↵], and then set **IP Mode** to **Manual**.
5. Press the ▼ button on your remote to go to the IP Address entry field, and then press [↵].
6. Enter the first portion of the **IP Address** into the first entry field using the number keys on your remote. Press the right arrow button to go to the next field.
7. Enter the next portion of the **IP Address**. Press the right arrow button to go to the next field.
8. Repeat the entry process for each field in the **IP Address**.

   If you make a mistake when entering a number, re-enter the number to correct it. You can also press the up or down arrow button to change the number one unit at a time.

9. When done entering the **IP Address**, press [↵].
10. Press the down arrow key to go to the **Subnet Mask** fields, and then press [↵].
11. Repeat the same entry process for **Subnet Mask**, **Gateway**, and **DNS Server**.
12. When done, select **OK** at the bottom of the page, and then press [↵]. The network test screen appears and the verification process starts. When the connection has been verified, the “Internet is connected successfully.” message appears.

7.1.3 Connecting to a Wireless Network

To connect your product to your wireless network, you need a wireless router or modem and a Samsung Wireless LAN adapter (WIS09ABGN, WIS09ABGN2 or WIS10ABGN - sold separately), which you connect to your product back or side panel USB port. See the illustration below.



Samsung's Wireless LAN adapter is sold separately and is offered by selected retailers, Ecommerce sites, and Samsungparts.com. Samsung's Wireless LAN adapter supports the IEEE 802.11a/b/g and n communication protocols. Samsung recommends using IEEE 802.11n. When you play video over a network connection, the video may not play smoothly.

- You must use the "Samsung Wireless LAN adapter" (WIS09ABGN, WIS09ABGN2 or WIS10ABGN) to use a wireless network.
- The Samsung Wireless LAN Adapter and the USB extension Cable are sold separately and are offered by select retailers, Ecommerce sites, and Samsungparts.com.
- To use a wireless network, your product must be connected to a wireless IP sharer (either a router or a modem). If the wireless IP sharer supports DHCP, your product can use a DHCP or static IP address to connect to the wireless network.
- Select a channel for the wireless IP sharer that is not currently being used. If the channel set for the wireless IP sharer is currently being used by another device nearby, this will result in interference and communication failure.
- Your product supports only the following wireless network security protocols:
  - Authentication Mode : WEP, WPAPSK, WPA2PSK
  - Encryption Type : WEP, TKIP, AES.
- If you select the Pure High-throughput (Greenfield) 802.11n mode and the Encryption type is set to WEP, TKIP or TKIP AES (WPS2Mixed) on your AP or wireless router, Samsung product will not support a connection in compliance with new Wi-Fi certification specifications.
- If your wireless router supports WPS (Wi-Fi Protected Setup), you can connect to the network via PBC (Push Button Configuration) or PIN (Personal Identification Number). WPS will automatically configure the SSID and WPA key in either mode.
- If your router, modem, or device is not certified, it may not connect to the product via the "Samsung Wireless LAN adapter."
- Ensure the product is turned on before you connect the Samsung Wireless LAN adapter.
- Connection Methods: You can setup the wireless network connection in five ways:
  - Auto Setup (Using the Auto Network Search function)
  - Manual Setup

- Ad Hoc
- WPS (PBC)
- One Foot Connection

- The product may not recognize the Samsung Wireless LAN adapter if you connect it to the product with a USB hub or USB extension cable other than the cable supplied with the product.

7.1.4 Wireless Network Setting

Automatic Network Setup

Most wireless networks have an optional security system that requires devices that access the network to transmit an encrypted security code called an Access or **Security Key**. The **Security Key** is based on a Pass Phrase, typically a word or a series of letters and numbers of a specified length you were asked to enter when you set up security for your wireless network. If you use this method of setting up the network connection, and have a **Security Key** for your wireless network, you will have to enter the Pass Phrase during the the automatic or manual setup process.

How to set up automatically

1. Go to the **Network Settings** screen.
2. Select **Wireless (General)**, press [↵], and then press [↵] again.
3. The **Network** function searches for available wireless networks. When done, it displays a list of the available networks.
4. In the list of networks, press the ▲ or ▼ button to select a network, and then press the [↵] button twice.

   If the wireless router is set to Hidden (Invisible), you have to select **Add Network** and enter the correct **Network Name (SSID)** and **Security key** to establish the connection.

5. If the **Enter security key** screen appears, go to step 6. If you select a wireless router that does not have security, go to step 8.
6. If the router has security, enter the **Security key** (**Security key** or **PIN**).

   - When you enter the **Security key** (**Security key** or **PIN**), use ◀/▶/▲/▼ buttons on your remote to select number/ characters. Press the [↵] button to enter the characters.
   - You can also enter numbers by pressing the number buttons on your remote.

7. When done, use the right arrow button to move the cursor to **Next**, and then press [↵].
8. The network connection screen appears and the verification process starts. When the connection has been verified, the “Internet is connected successfully.” message appears.

   - If the network does not accept the **Security key** (**Security key** or **PIN**), select **Retry** or select **IP Settings** to enter the settings manually.

- If you want to set up the connection manually, select **IP Settings**. Then, go to the next section, “How to set up manually”.

Manual Network Setup

Use the Manual **Network Setup** when connecting your product to a network that requires a Static IP address or if the automatic connection process has failed.

Getting the Network Connection Values

To view the Network connection values on most Windows computers, follow these steps:

1. Right click the Network icon on the bottom right of the screen.
2. In the pop-up menu that appears, click Status.
3. On the dialog that appears, click the Support tab.
4. On the Support Tab, click the Details button. The Network connection values are displayed.

How to set up manually

To set up your product cable network connection manually, follow these steps:

1. Go to the **Network Settings** screen.
2. Select **Wireless (General)**, press [↵], and then press [↵] again.
3. The **Network** function searches for available wireless networks. When done, it displays a list of the available networks.
4. In the list of networks, press the ▲ or ▼ button to select a network, and then press the [↵] button twice.

   If the wireless router is set to Hidden (Invisible), you have to select **Add Network** and enter the correct **Network Name (SSID)** and **Security key** to establish the connection.

5. If the Enter security key screen appears, go to step 6. If you selected an wireless router that does not have security, go to step 8.
6. Enter the **Security key** (**Security key** or **PIN**).

   - When you enter the **Security key** (**Security key** or **PIN**), use the ◀/▶/▲/▼ buttons on your remote to select number/characters. Press [↵] to enter the characters.
   - You can also enter numbers by pressing the number buttons on your remote.
   - You should be able to find the Pass Phrase on one of the set up screens you used to set up your router or modem.

7. When done, use the ▶ button to move the cursor to **Next**, and then press the [↵] button.
8. The network connection screen appears and the verification process starts. Press [↵] to cancel. Select **IP Settings** on the network connection screen. The **IP Settings** screen appears.
9. Select the field on the top, press [↵], and then set **IP Mode** to **Manual**.
10. Press the ▼ button on your remote to go to the **IP Address** entry field, and then press [↵].

11 Enter the first portion of the **IP Address** (for example, 105) into the first entry field using the number keys on your remote. Press the ▶ button to go to the next field.

12 Enter the next portion of the **IP Address**. Press the ▶ button to go to the next field.

13 Repeat the entry process for each field in the **IP Address**.

If you make a mistake when entering a number, re-enter the number to correct it. You can also press the ▲ or ▼ button to change the number one unit at a time.

14 When done entering the **IP Address**, press [↵].

15 Press the ▼ button to go to the **Subnet Mask** fields, and then press [↵].

16 Repeat the same entry process for **Subnet Mask**, **Gateway**, and **DNS Server**.

17 When done, select **OK** at the bottom of the page, and then press [↵]. The network connection screen appears and the verification process starts. When the connection has been verified, the "Internet is connected successfully." message appears.

7.1.5 WPS(PBC)

How to set up using WPS(PBC)

If your router has a **WPS(PBC)** button, follow these steps:

1 Go to **Network Setting** screen.

2 Select **WPS(PBC)**, press [↵], and then press [↵] again.

3 Press the **WPS(PBC)** button on your router within 2 minutes. Your product automatically acquires all the network setting values it needs and connects to your network.

4 The network connection screen appears, and network setup is done.

7.1.6 One Foot Connection

The **One Foot Connection** function lets you connect your Samsung product automatically to a Samsung wireless routers. If your wireless router does not support **One Foot Connection**, you must connect using one of the other methods.

You can check for equipment that supports **One Foot Connection** on www.samsung.com.

How to set up using One Foot Connection

1 Turn on the Samsung wireless router and the product.

2 Go to **Network Settings** screen.

3 Select **One Foot Connection**, and press [↵], then press [↵] again.

4 Place the wireless router in parallel with and no farther away than 25cm(about 9 3/4 inches) of Samsung Wireless Adapter.

If **One Foot Connection** does not connect your product to your Router, a pop- up screen appears on the screen notifying you of the failure. If you want to try using **One Foot Connection** again, reset the wireless router, and then try again from Step 1. You can also choose one of the other connection setup methods.

5 The network connection screen appears, and network setup is done.

6 Place the wireless router in a desired location.

If the wireless router's settings change or you install a new wireless router, you must perform the **One Foot Connection** procedure again, beginning from Step 1.

Priority QOS

This Priority QOS function is unique to Samsung wireless routers.

You can connect a Samsung wireless router to many devices, such as laptops, mobile phones, BD players etc. But, when you connect a Samsung product to a Samsung wireless router, the Samsung wireless router gives the Samsung product a priority connection.

This ensures you get the highest quality streaming contents and the fastest throughput speed.

- Priority QOS makes your product faster by giving it priority bandwidth. (Priority QOS is optional. You can turn it on and off.)
- Because your Samsung product has a priority connection, you can enjoy HD content without buffering.

The connection speed may vary based on the network environment.

7.1.7 Ad Hoc Network Setup

You can connect to a mobile device supporting Ad-hoc connections without a wireless router or AP through the product.

How to set up using Ad hoc

1 Go to **Network Settings** screen.

2 Select **Wireless (General)**, and press [↵], then press [↵] again.

3 Select **Ad hoc**. The message "**Ad hoc service supports a direct connection with Wi-Fi compatible devices like a cell phone or PC. Other network services may be limited. Do you want to change the network connection?**" is displayed.

4 Select **OK**, and press [↵]. The product searches for the mobile device.

5 When the product finishes searching for your mobile device, input the generated **Network Name (SSID)** and **Security Key** into the device you want to connect and then connect to the network

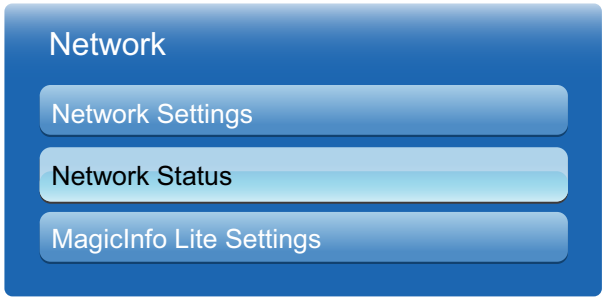
- If network does not operate normally, check the **Network Name (SSID)** and **Security key** again. An incorrect **Security key** may cause a malfunction.

- If a device is connected once, it is displayed in the Network Setting list. When you connect to it again, you can find it in the list.

7.2 Network Status

MENU → Network → Network Status → ENTER

You can check the current network and Internet status.



The displayed image may differ depending on the model.

7.3 MagicInfo Lite Settings

MENU → Network → MagicInfo Lite Settings → ENTER[↵]

1 Server

- Setting the MagicInfo Lite server IP
  - Enter the server IP address and port number.
  - Use 7001 as the port number.

    If unable to connect to the server using port number 7001, check with your server administrator to find the correct port number and then change the port number.
- FTP Mode
  - Select an FTP operating mode: Active or Passive.
- Default Storage
  - Specify the default memory to save schedules or content sent from the server to.
  - If the default storage space is set to USB, a schedule will not run if a USB device is not connected.
  - Send a notification message to the server when internal memory is used up.

2 Storage

- Internal Memory: Displays the space currently being used or deletes all content.
- USB: Displays the space currently being used.

3 Slideshow

- Image Viewer Time: Sets the time length you want to display images played from Local Schedule or by one of the auto playback functions.
- PPT Viewer Time: Sets the time length you want to display each page of a document file played from Local Schedule or by one of the auto playback functions.
- Image Effect: Configures the image transition effects
  - Fade1, Fade2, Blind, Spiral, Checker, Linear, Stairs, Wipe, Random, None

4 Schedule Name

- Select a schedule title format when creating a local schedule:
  - YYYYMMDD, YYYYDDMM or DDMMYYYY

5 Safely Remove USB

- Safely removes USB memory.

6 Information

- Device Name: Displays the name of a device recognized by the server.
- Serial Number: Displays the original identification number of a device.
- Software Version: Displays the software version of a device.

Refer to page 153 for details about the MagicInfo Lite Player Guide menu.

8.1 Multi Control

MENU → System → Multi Control → ENTER

Assign an individual ID to your product.

8.1.1 Configuring settings for Multi Control

- **MDC Connection**

  Select a method to connect to MDC to receive the MDC signal.

  - **RS232C MDC**

    Communicate with MDC via the RS232C-stereo cable.

  - **RJ45 MDC**

    Communicate with MDC via the RJ45 cable.

- **ID Setup**

  Assign an ID to a set. (Range: 0~99)

  Press ▲ or ▼ to select a number, and press [↵].

- **ID Input**

  Enter the ID number of the product connected to the input cable for input signal reception.

  Enter the number you want using the number buttons on the remote control.

Refer to page 64 for details about the **MDC** menu.

8.2 Time

MENU → System → Time → ENTER

You can configure Clock Set or Sleep Timer. You can also set the product to automatically turn on or off at a specified time using the Timer function.

8.2.1 Clock set

Set the clock to use the various various timer features of the product.

Changing the Setting for Clock

- Clock Set

  Set the Date and Time.

  Select Clock Set. Select Date or Time, and then press [↵]. Use the number buttons to enter numbers or press the up and down arrow buttons. Use the left and right arrow buttons to move from one entry field to the next. Press [↵] when done. To exit Clock Set, select Close, and then press [↵].

  You can set the Date and Time directly by pressing the number buttons on the remote control.

8.2.2 Sleep Timer

Automatically shuts off the product after a preset period of time. (Off / 30 min / 60 min / 90 min / 120 min / 150 min / 180 min).

Use the up and down arrows to select a period of time, and then press [↵]. To cancel Sleep Timer, select Off.

8.2.3 On Timer

Set On Timer so that your product turns on automatically at a time and on a day of your choosing.

- On Timer: You can set up three separate On Timer configurations. (On Timer 1, On Timer 2, On Timer 3)

  You must set the clock before you can use On Timer.

  - Setup: Select Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun or Manual. If you select Manual, you can choose the days you want On Timer to turn on your product.

    The check mark indicates days you've selected.

- **Time**: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.
- **Volume**: Set the desired volume level. Use the left and right arrow buttons to change the volume level.
- **Source**: Select the input source of your choice.
- **Music** / **Photo** (when the **Source** is set to **USB**): Select a folder in the USB device containing music or photo files you want played when the product on automatically.

- If there is no music file on the USB device or you don't select a folder containing a music file, the Timer function does not operate correctly.
- If there is only one photo file in the USB, the Slide Show will not play.
- If a folder name is too long, the folder cannot be selected.Each USB you use is assigned its own folder. When using more than one of the same type of USB, make sure the folders assigned to each USB have different names.
- We recommend that you use a USB memory stick and a multi card reader when using **On Timer**. The **On Timer** function may not work with USB devices with a built-in battery, MP3 players, or PMPs made by some manufacturers because the product can take too long to recognize these devices.

8.2.4 Off Timer

You can set up three separate **Off Timer** configurations. (**Off Timer 1**, **Off Timer 2**, **Off Timer 3**)

You must set the clock before you can use **Off Timer**.

- **Setup**: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual**. If you select **Manual**, you can choose the days you want **Off Timer** to turn off your product.

The check mark indicates days you've selected.

- **Time**: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.

8.2.5 Holiday Management

Timer will be disabled during a period specified as a holiday.

Setting Holiday Management

- **Add**: Specify the period you want to add as a holiday.
  - Select the start and end dates of the holiday you want to add using the ▲/▼ buttons, and click the **Save** button.
    - **Start**: Set the start date of the holiday.
    - **End**: Set the end date of the holiday.

- Delete: Delete all items from the list of holidays.

  Select Delete. The message "Delete all holidays?" will appear.

  Select Yes. All holidays will be deleted.

- Apply: Set the On Timer and Off Timer to not activate on public holidays.
  - Press ENTER[↵] to select the On Timer and Off Timer settings you do not want to activate.
  - The selected On Timer and Off Timer will not activate.

8.3 Menu Language

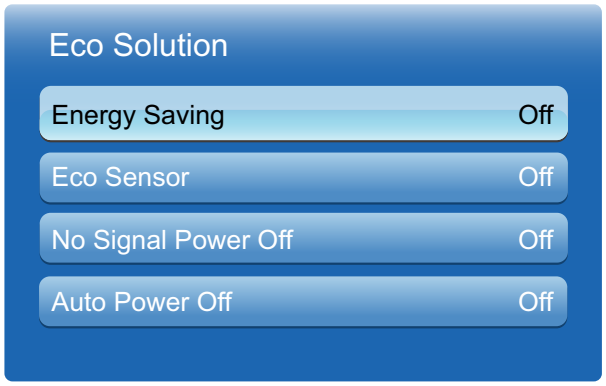
MENU → System → Menu Language → ENTER↵

Set the menu language.

A change to the language setting will only be applied to the onscreen menu display. It will not be applied to other functions on your PC.

8.4 Eco Solution

MENU → System → Eco Solution → ENTER



The displayed image may differ depending on the model.

8.4.1 Energy Saving

Save power with the **Energy Saving** feature.

While Energy Saving mode is active, the product power consumption will be controlled to save power.

- **Off** / **Low** / **Medium** / **High** / **Picture Off**

8.4.2 Eco Sensor (Off / On)

To enhance your power savings, the picture settings will automatically adapt to the light in the room.

If you adjust **Backlight** in the **Picture** menu, **Eco Sensor** will be set to **Off**.

- **Min. Backlight**: When **Eco sensor** is **On**, you can manually adjust the minimum screen brightness.

  If **Eco Sensor** is **On**, the display brightness may change (become slightly darker or brighter) depending on the surrounding light intensity. You can control the screen's minimum brightness with the **Min. Backlight** function.

8.4.3 No Signal Power Off

To avoid unnecessary energy consumption, you can set how long you want the product to remain on if it's not receiving a signal.

- Off / 15 min. / 30 min. / 60 min.

- Disabled when an attached PC is in power saving mode.
- The product will automatically power off at a specified time. The time can be changed as required.

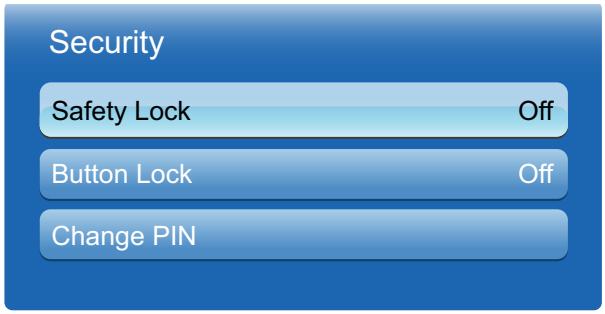
8.4.4 Auto Power Off (Off / On)

The product will automatically turn off if you don't press a button on the remote or touch a button on product front panel within 4 hours to prevent overheating.

8.5 Security

MENU → System → Security → ENTER

Every time you access the Security functions, the PIN screen will appear and the default PIN number is "0-0-0-0". The PIN screen closes and the Security menu appears.



The displayed image may differ depending on the model.

8.5.1 Safety Lock (Off / On)

All the menus and buttons of the product and remote control, except for the LOCK button on the remote control, will be locked by the Safety Lock function. To unlock the menus and buttons, press the LOCK button and then enter the password (default password: 0 - 0 - 0 - 0).

8.5.2 Button Lock (Off / On)

This menu can be used to lock the buttons on the product. Only the remote control can control the product if **Button Lock** is set to **On**.

8.5.3 Change PIN

The **Change PIN** screen will appear. Choose any 4 digits for your PIN and enter it in **Enter New PIN**. Re-enter the same 4 digits in **Confirm New PIN**. When the Confirm screen disappears, press the **Close** button. The product has memorized your new PIN.

8.6 Auto Protection Time

MENU → System → Auto Protection Time → ENTER

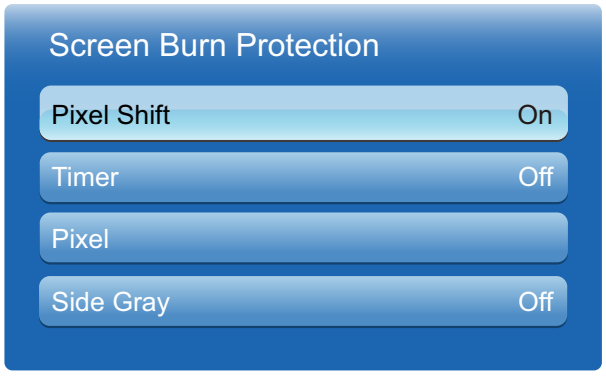
If the screen displays a still image for a certain period of time you define, the product activates the screen saver to prevent the formation of burnt in ghost images on the screen.

- Off / 2 hours / 4 hours / 8 hours / 10 hours

8.7 Screen Burn Protection

MENU → System → Screen Burn Protection → ENTER

To reduce the possibility of screen burn, this unit is equipped with Pixel Shift screen burn prevention technology. Pixel Shift moves the picture slightly on the screen. The Pixel Shift Time setting allows you to program the time between movements of the picture in minutes.



The displayed image may differ depending on the model.

8.7.1 Pixel Shift

To prevent after-images on the screen, you can use this function to have pixels move on the LCD in the horizontal or vertical direction.

Available Pixel Shift Settings and Optimum Settings

	Available Settings	Optimum Settings for HDMI/PC
Horizontal	0~4 (pixels)	4
Vertical	0~4 (pixels)	4
Time (minute)	1~4 min	4 min

- The **Pixel Shift** value may differ depending on the product size (inches) and mode.
- This function is not available in the **Screen Fit** mode.

- **Horizontal**: Sets how many pixels the screen moves horizontally.
- **Vertical**: Sets how many pixels the screen moves vertically.
- **Time**: Set the time interval for performing the horizontal or vertical movement, respectively.

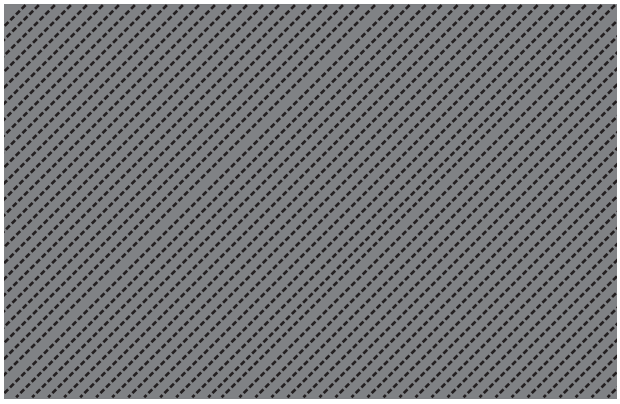
8.7.2 Timer

You can set the timer for **Screen Burn Protection**.

If you start the operation to erase any residual image, the operation will be performed for the set period of time and then automatically finish.

- **Mode**: You can change the **Safety Screen** Type.
- **Period**: Use this function to set the execution period for each mode set in the timer.
- **Time**: Within the set period of time specify a time for execution.

8.7.3 Pixel



This function prevents after-images by moving many pixels on the screen.

8.7.4 Side Gray

Select the brightness of the grey for the screen background.

- **Off** / **Light** / **Dark**

8.8 Video Wall

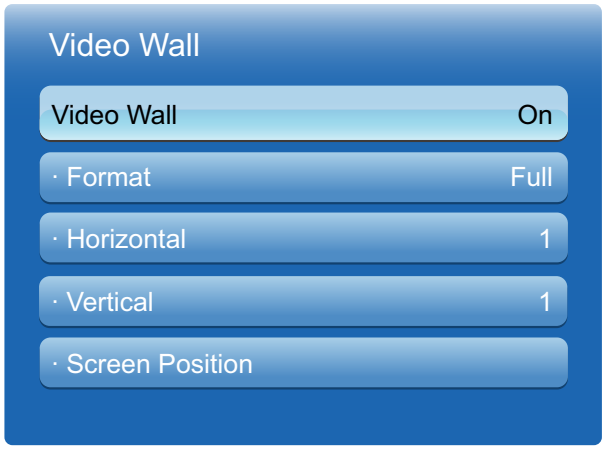
MENU → System → Video Wall → ENTER

Customize the layout of multiple displays that are connected to form a video wall. In addition, display part of a whole picture or repeat the same picture on each of the connected multiple displays. To display multiple images, refer to MDC Help or the MagicInfo user guide. Some models may not support the MagicInfo function.

- If more than four displays are connected horizontally and vertically, it is recommended that you use an input resolution of XGA (1024 x 768) level or higher to prevent a dark picture due to degradation in the contrast or color intensity.
- To play 3D content when **Video Wall** is set to **On**, a multi HD player (MHP) is required.

8.8.1 Video Wall

You can activate or deactivate **Video Wall**. To organize a video wall, select **On**.



The displayed image may differ depending on the model.

8.8.2 Format

Select a format to display images on multiple displays.

- **Full** : Display images in full screen.
- **Natural** : Display images at the original resolution without enlarging or reducing.

The **Format** option is only enabled when **Video Wall** is set to **On**.

8.8.3 Horizontal

This function automatically divides the screen according to the specified number of horizontal displays. Enter the number of horizontally arranged displays. The horizontal screen will automatically be divided according to the number entered. A maximum of 15 displays can be assigned to the horizontal arrangement.

- The screen can be divided into a maximum of 100 screens (horizontal and vertical screens multiplied). For example, if the horizontal arrangement is set to 15, a maximum of 6 displays can be assigned to the vertical arrangement. Conversely, if the vertical arrangement is set to 15, a maximum of 6 displays can be assigned to the horizontal arrangement.
- The **Horizontal** option is only enabled when **Video Wall** is set to **On**.

8.8.4 Vertical

This function automatically divides the screen according to the specified number of vertical displays. Enter the number of vertically arranged displays. The vertical screen will automatically be divided according to the number entered. A maximum of 15 displays can be assigned to the vertical arrangement.

- The screen can be divided into a maximum of 100 screens (horizontal and vertical screens multiplied). For example, if the horizontal arrangement is set to 15, a maximum of 6 displays can be assigned to the vertical arrangement. Conversely, if the vertical arrangement is set to 15, a maximum of 6 displays can be assigned to the horizontal arrangement.
- The **Vertical** option is only enabled when **Video Wall** is set to **On**.

8.8.5 Screen Position

You can customize the arrangement of split screens by moving displays identified with a number using the **Screen Position** function.

Select Screen Position to display the arrangement of displays (identified with a number) specified according to the Horizontal or Vertical settings. To customize the arrangement, move a number (display) using the direction buttons on the remote control and press [↵].

- A maximum of 100 displays can be arranged in **Screen Position**.
- The **Screen Position** option is only enabled when **Video Wall** is set to **On**.
- The **Screen Position** window is only displayed when **Horizontal** and **Vertical** are configured.

8.9 Source AutoSwitch Settings

MENU → System → Source AutoSwitch Settings → ENTER

- Turning on the display with **Source AutoSwitch On**, and the previous video source selection is not active, the display will automatically search the different video input sources for active video.
- **Source AutoSwitch**

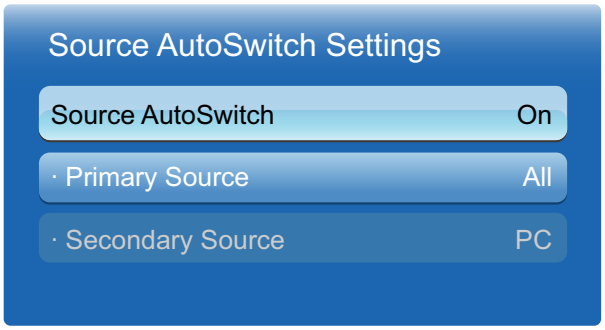
  When the **Source AutoSwitch** is **On**, the display video source will automatically be searched for active video.

  The **Primary Source** selection will be activated, if the current video source is not recognized.

  Secondary Source selection will become active, if no primary video source is available.

  If both the primary and secondary input sources are not recognized, the display will perform two searches for an active source, each search checking the primary and then secondary source. If both searches fail, the display will return to the first video source and display a message indicating that there is no signal.

  When the **Primary Source** selection is set to **All**, the display will search all the video source inputs twice in sequence looking for an active video source, returning back to the first video source in the sequence if no video is found.



The displayed image may differ depending on the model.

Press ▲/▼ to select the option you want and press [].

- **Primary Source**

  Specify **Primary Source** for the automatic input source.
- **Secondary Source**

  Specify **Secondary Source** for the automatic input source.

8.10 General

MENU → System → General → ENTER

The displayed image may differ depending on the model.

8.10.1 Max. Power Saving

Turns off the product to reduce power consumption after the PC has been left idle for a specified period of time.

8.10.2 Game Mode

When connecting to a game console such as PlayStation™ or Xbox™, you can enjoy a more realistic gaming experience by selecting game mode.

- Precautions and limitations for **Game Mode**
  - To disconnect the game console and connect another external device, set **Game Mode** to **Off** inthe **System** menu.
  - If you display the product menu in **Game Mode**, the screen shakes slightly.
- **Game Mode** is not available when the input source is set to **PC**.
- After connecting the game console, set **Game Mode** to **On**. Unfortunately, you may notice reduced picture quality.
- If **Game Mode** is **On**
  - **Picture Mode** is set to **Standard** and **Sound Mode** is set to **Movie**.

8.10.3 BD Wise

Provides the optimal picture quality for Samsung DVD, Blu-ray and Home Theater products which support **BD Wise**. When **BD Wise** is turned **On**, the picture mode is automatically changed to the optimal resolution.

Available when you connect Samsung products that support **BD Wise** through an HDMI cable to the product.

8.10.4 Auto Power

Enabling this option will automatically power on the product if the power cable is connected.

8.10.5 Standby Control

You can set the screen standby mode to be applied when an input signal is received.

- **Auto**

  Power-saving mode will activate if no input signals are detected even though a source device is connected to the display.

  The message "**No Signal**" will appear if no source device is connected.

- **On**

  Power-saving mode will activate if no input signals are detected.

- **Off**

  The message "**No Signal**" will appear if no input signals are detected.

  - The **Standby Control** option is only enabled when **Source** is set to **PC** / **DVI** / **HDMI**.
  - If "**No Signal**" is displayed although a source device is connected, check the cable connection. Refer to page 52 for details about connecting source devices.

8.10.6 Lamp Schedule

Enables the lamp value to be adjusted to a user-specified value at a specified time in MDC mode.

8.10.7 OSD Display

Displays or hides a menu item on the screen.

- **Source OSD** / **No Signal OSD** / **MDC OSD**

8.10.8 Power On Adjustment

You can set the warm-up time for the screen to turn on after the power button is pressed. (Range: 0 – 50 seconds)

A warm-up time that is too short may damage the product due to overvoltage.

8.10.9 Temperature Control

This function detects the internal temperature of the product. You can specify the temperature range that is acceptable.

The default temperature is set to 77˚C.

The recommended operating temperature for this product is 75 to 80˚C (based on an ambient temperature of 40˚C).

The screen will become darker if the current temperature exceeds the specified temperature limit. If the temperature continues to rise, the product will power off to prevent overheating.

8.10.10 Device Name

Selet or enter a **Device Name**. This name can be shown on network remote controls over the network.

8.11 Anynet+(HDMI-CEC)

MENU → System → Anynet+(HDMI-CEC) → ENTER

8.11.1 Anynet+(HDMI-CEC)

What is **Anynet+**?

Anynet+ is a function that enables you to control all connected Samsung devices that support **Anynet+** with your Samsung product remote. The **Anynet+** system can be used only with Samsung devices that have the **Anynet+** feature. To be sure your Samsung device has this feature, check if there is an **Anynet+** logo on it.

- You can only control Anynet+ devices using the product remote control, not the buttons on the product.
- The product remote control may not work under certain conditions. If this occurs, reselect the Anynet+ device.
- The Anynet+ functions do not operate with other manufacturers' products.
- For instructions explaining how to connect Anynet+ external devices, refer to the device's user manual You must connect an Anynet+ device using an HDMI cable. Some HDMI cables may not support Anynet+ functions.
- Anynet+ works when the AV device supporting Anynet+ is in the standby or on status.
- Anynet+ supports up to 12 AV devices in total. Note that you can connect up to 3 devices of the same type.
- However, you can connect only one Anynet+ Home Theater. To connect an Anynet+ Home Theate, connect the Home Theater to the product using an HDMI cable then.

Anynet+ Menu

The Anynet+ menu changes depending on the type and status of the Anynet+ devices connected to the product.

Anynet+ Menu	Description
View PC	Changes Anynet+ mode to PC mode.
Device List	Shows the Anynet+ device list.
(device_name) **MENU**	Shows the menu of the connected device menus. E.g. if a DVD player is connected, the disc menu of the DVD player will appear.
(device_name) **Tools**	Shows the tools menu of the connected device. E.g. if a DVD player is connected, the tools menu of the DVD player will appear. Depending on the device, this menu may not be available.

Anynet+ Menu	Description
(device_name) Title Menu	Shows the title menu of the disc in the connected device. E.g. If a DVD player is connected, the title menu of the movie in the DVD player will appear. Depending on the device, this menu may not be available.
Receiver	Sound is played through the Receiver.

8.11.2 Auto Turn Off (No / Yes)

Setting an Anynet+ Device to turn Off automatically when the product is turned off.

The active source on the product remote must be set to product to use the Anynet+ function. If you set Auto Turn Off to Yes, connected external devices are also turned off when the product is turned off. If an external device is still recording, it may or may not turn off.

Switching between Anynet+ Devices

1. Press the TOOLS button, select Anynet+ (HDMI-CEC), and then press [↵].
2. Select Device List, and then press the [↵] button.

   If you cannot find a device you want, select Refresh to refresh the list.
3. Select a device, and then press the [↵] button. You can switch to the selected device.

   The Device List menu appears only when you set Anynet+ (HDMI-CEC) to On in the System menu.

   - Switching to the selected device may take up to 2 minutes. You cannot cancel the switching operation while switching is in progress.
   - If you have selected an Anynet+ device by pressing the SOURCE button and then selecting its input source, you cannot use the Anynet+ function. Make sure to switch to an Anynet+ device by using the Device List.

8.11.3 Receiver

You can listen to sound through a **Receiver** (i.e. Home Theater) instead of the product Speaker.

To listen to sound through a receiver, go to **Receiver** screen (**System** → **Anynet+ (HDMI-CEC)** → **Receiver**). Then select **Receiver** and set to **On**.

If your **Receiver** supports audio only, it may not appear in the device list.

Troubleshooting for Anynet+

Problem	Possible Solution
Anynet+ does not work.	• Check if the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only. • You can connect only one receiver (home theater). • Check if the Anynet+ device power cord is properly connected. • Check the Anynet+ device's Video/Audio/HDMI cable connections. • Check whether **Anynet+ (HDMI-CEC)** is set to **On** in the Anynet+ setup menu. • Check whether the remote control is Anynet+ compatible. • If you have removed and then reconnected the HDMI cable, please make sure to search devices again or turn your product off and on again. • Check if the Anynet+ function of the Anynet device is set on.
I want to start Anynet+.	• Check if the Anynet+ device is properly connected to the product and check if the **Anynet+ (HDMI-CEC)** is set to **On** in the Anynet+ Setup menu. • Press the **TOOLS** button to display the Anynet+ menu and select a menu you want.
I want to exit Anynet+.	• Select **View PC** in the Anynet+ menu. • Press the **SOURCE** button on the product remote control and select a non- Anynet+ device.

Problem	Possible Solution
The message “Connecting to Anynet+ device...” appears on the screen.	• You cannot use the remote control when you are configuring Anynet+ or switching to a view mode. • Use the remote control after the product has completed Anynet+ configuration or has finished switching to Anynet+.
The connected device is not displayed.	• Check whether or not the device supports Anynet+ functions. • Check whether or not the HDMI cable is properly connected. • Check whether **Anynet+ (HDMI-CEC)** is set to **On** in the Anynet+ setup menu. • Search Anynet+ devices again. • Anynet+ requires an HDMI connection. Some HDMI cables may not support Anynet+ functions. • If the connection is terminated because there has been a power failure or the HDMI cable has been disconnected, please repeat the device scan.

8.12 DivX® Video On Demand

MENU → System → DivX® Video On Demand → ENTER

Shows the registration code authorized for the product. If you connect to the DivX web site and register using that code, you can download the VOD registration file.

For more information about DivX® VOD, visit “http://vod.divx.com”.

8.13 Network Remote Control

MENU → System → Network Remote Control → ENTER

Turn on/off or give permission to Samsung mobile phone devices to connect with and control the product.

You must have a Samsung Mobile phone/device which supports Wireless Remote Control. For more details, refer to each device’s manual.

8.14 Reset System

MENU → System → Reset System → ENTER

This option returns the current settings under system to the default factory settings.

8.15 Reset All

MENU → System → Reset All → ENTER

This option returns all the current settings for a display to the default factory settings.

9 Support

9.1 Software Upgrade

MENU → Support → Software Upgrade → ENTER

The **Software Upgrade** menu lets you upgrade your product software to the latest version.

- **Current Version**: This is the software version already installed in the product.

Be careful not to turn off the power until the upgrade is complete. The product will turn off and on automatically after completing the software upgrade. When you upgrade software, all video and audio settings you have made will return to their default settings. We advise you to write down your settings so that you can easily reset them after the upgrade.

9.1.1 By USB

To upgrade by USB, follow these steps:

1. Visit www.samsung.com.
2. Download the latest USB software upgrade exe archive to your computer.
3. Extracts the exe archive to your computer. You should have a single folder with the same name as the exe file.
4. Copy the folder to a USB flash drive.
5. Turn on the product, and then insert the USB flash drive into the USB port of the product.
6. In the product menu, go to **Support** → **Software Upgrade**.
7. Select **By USB**.

Please be careful not to remove the USB drive until the upgrade is complete.

9.1.2 Alternative Software

The **Alternative Software** option lets you upgrade using a file the product downloaded earlier, but you decided not to install immediately, or a file downloaded by the product in Standby Mode. To upgrade By **Alternative Software**, follow these steps.

1. If upgrade software has been downloaded, you will see the software version number to the right of **Alternative Software**.
2. Select **Alternative Software**, and then press the [ENTER] button.
3. The product displays a message asking if you want to upgrade. Select **Yes**. The product begins the upgrade.
4. When the upgrade is complete, the product turns off automatically, and then turns on.

9.2 Contact Samsung

MENU → Support → Contact Samsung → ENTER

View this information when your product does not work properly or when you want to upgrade the software. You can find information regarding our call centers and how to download products and software.

10.1 File Formats Compatible with MagicInfo Lite Player

[Read before using **MagicInfo Lite Player**]

- Supported USB-device file systems include FAT16 and FAT32. (NTFS is not supported.)
- A file with a vertical and horizontal resolution larger than the maximum resolution cannot be played.

  Check the vertical and horizontal resolution of the file.
- Video that does not contain audio data is not supported. Check that the video file contains audio data.
- Check the supported video and audio Codec types and Versions.
- Check the supported file versions.
  - Flash version up to 10.1 is supported
  - PowerPoint version up to 97 – 2007 is supported
- Content with a size of 2GB or larger cannot be assigned to **Network Schedule**.

10.1.1 Video / Audio

File Extension	Container	Video Codec	Resolution	Frame rate(fps)	Bit rate (Mbps)	Audio Codec
*.avi *.mkv	AVI MKV	DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	8	MP3 / AC3 / LPCM / ADPCM / DTS Core
		Motion JPEG	1920x1080	6 ~ 30	8	
*.asf	ASF	DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	8	MP3 / AC3 / LPCM / ADPCM /WMA
		H.264 BP / MP / HP	1920x1080	6 ~ 30	25	
		MPEG4 SP / ASP	1920x1080	6 ~ 30	8	
		Motion JPEG	1920x1080	6 ~ 30	8	
*.wmv	ASF	Window Media Video v9	1920x1080	6 ~ 30	25	WMA
*.mp4	MP4	H.264 BP / MP / HP	1920x1080	6 ~ 30	25	MP3 / ADPCM / AAC
		MPEG4 SP / ASP	1920x1080	6 ~ 30	8	
*.3gp	3GPP	H.264 BP / MP / HP	1920x1080	6 ~ 30	25	ADPCM / AAC / HE-AAC
		MPEG4 SP / ASP	1920x1080	6 ~ 30	8	

File Extension	Container	Video Codec	Resolution	Frame rate(fps)	Bit rate (Mbps)	Audio Codec
*.vro	VRO VOB	MPEG1	352x288	24 / 25 / 30	30	AC3 / MPEG / LPCM
		MPEG2	1920x1080	24 / 25 / 30	30	
*.mpg *.mpeg	PS	MPEG1	352x288	24 / 25 / 30	30	AC3 / MPEG / LPCM / AAC
		MPEG2	1920x1080	24 / 25 / 30	30	
		H.264	1920x1080	6 ~ 30	25	
*.ts *.tp *.trp	TS	MPEG2	1920x1080	24 / 25 / 30	30	AC3 / AAC / MP3 / DD+ / HE-AAC
		H.264	1920x1080	6 ~ 30	25	
		VC1	1920x1080	6 ~ 30	25	

Video

- Video content without audio is not supported.
- 3D video is not supported.
- Content with a resolution larger than the resolution specified in the table above is not supported.
- Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.
- H.264 Level 4.1 or lower is supported.
- H.264 FMO/ASO/RS, VC1 SP/MP/AP L4, AVCHD are not supported.
- MPEG4 SP/ASP
  - 1280 x 720 or smaller : Max. 60 frames / Larger than 1280 x 720 : Max. 30 frames
- GMC 2 or higher is not supported.

Audio

- Audio content without video is not supported.

  (Only mp3 files are supported as background music for image/PPT slideshows. This feature is available only when using the network schedule menu.)
- Audio content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy audio during playback.
- WMA 7, 8, 9 STD or lower is supported.
- WMA 9 PRO does not support lossless audio and multi-channel audio higher than 2 channels.
- WMA sampling rate 22050Hz mono is not supported.

Image

- Compatible image file format : Jpeg
- Supported maximum resolution : 15,360 x 8640
- Supported image effects : 8 effects (Fade1, Fade2, Blind, Spiral, Checker, Linear, Stairs, Wipe)

Flash

- Compatible with Flash 10.1
- Flash Animation
  - Compatible file format : SWF
- Resolution : 1280 x 720
  - Caution
    - Performance comparable to Flash Player on a Windows operating system cannot be guaranteed
    - Optimization is needed during content creation
- Flash Video
  - Compatible file format : FLV
  - Video
    - Codec : H.264 BP
    - Resolution : 1920 x 1080
  - Audio
    - Codec : H.264 BP
  - Caution
    - F4V file format is not supported
    - Screen Video is not supported

Power Point

- Compatible document file formats
  - Extension : ppt, pptx
  - Version : Office 97 ~ Office 2007
- Functions not supported
  - Animation effect
  - 3D shapes (which will be displayed in 2D)
  - Header and footer (some subitems are not supported)
  - Word Art
  - Align (A group alignment error may occur)
  - Office 2007 (SmartArt is not fully supported. 97 out of 115 subitems are supported.)
  - Object insertion
  - Opening encrypted documents
  - Vertical text (some subitems are not supported)
  - Slide notes and handout

10.2 Network Schedule

10.2.1 Connecting to a server

To use the **MagicInfo Lite Server**, the clock on the monitor must be set through the server (web).
To use local schedules and **AutoPlay** only, without using the **MagicInfo Lite Server**, the clock must be set using the remote control.

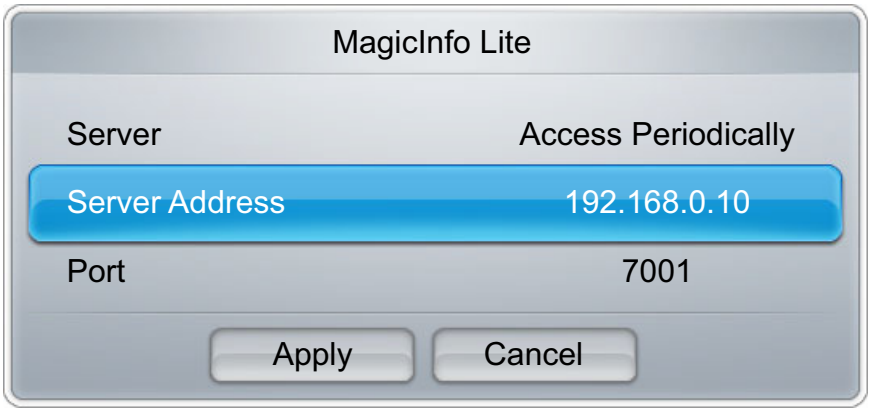
Network setup

To run **MagicInfo Lite**, connect to a network.

Refer to 121 page for details about the **Network Settings** menu.

Server setup

Go to **MENU** → **Network** → **MagicInfo Lite Settings** → **Server**. Next, enter the server information.
(E.g.: http://192.168.0.10:7001/MagicInfo/)



Configuring the FTP mode and default storage space

- **Default Storage**: Specify the location you want to save content (downloaded from the server) to.
  - **Internal Memory**: Save the content to the internal memory of the product.
  - **USB** memory: Save the content to USB memory.

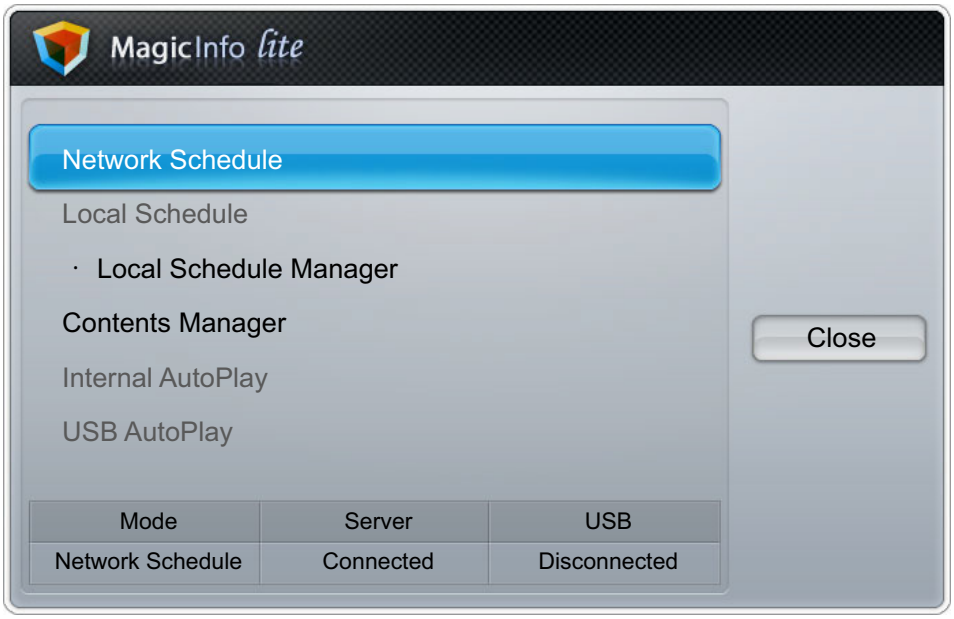
    If a network schedule is running when USB memory is not connected, the default content will run.

10.2.2 MagicInfo Lite Settings

MENU → Media → MagicInfo Lite → ENTER [↵]

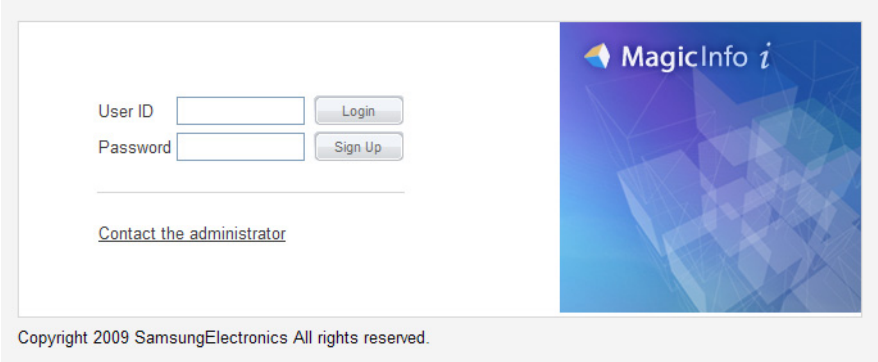
Press the **MagicInfo Lite** button on the remote control.

You can view whether the server is connected (approval) in the **MagicInfo Lite** menu screen. To view whether the server is connected when a network schedule is running, press **INFO** on the remote.



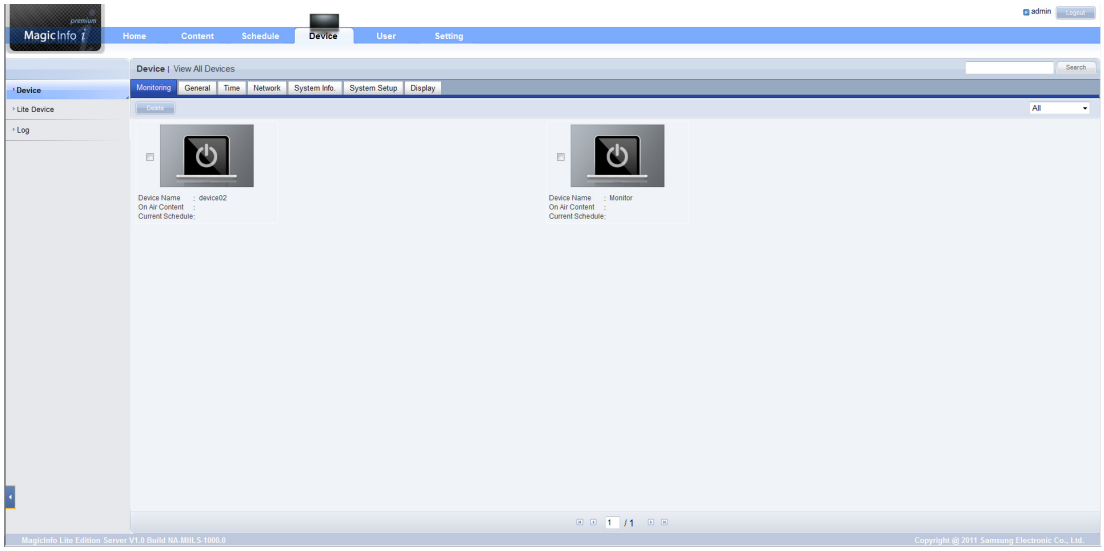
10.2.3 Approving a connected device from the server

1 Access the server you have assigned to your device.

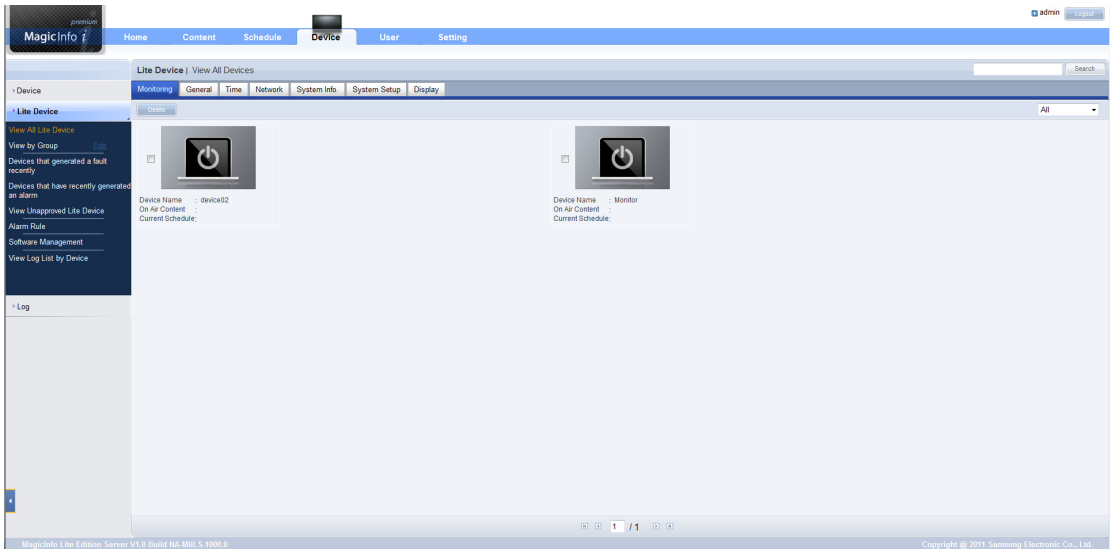


2 Enter your ID and password to log in.

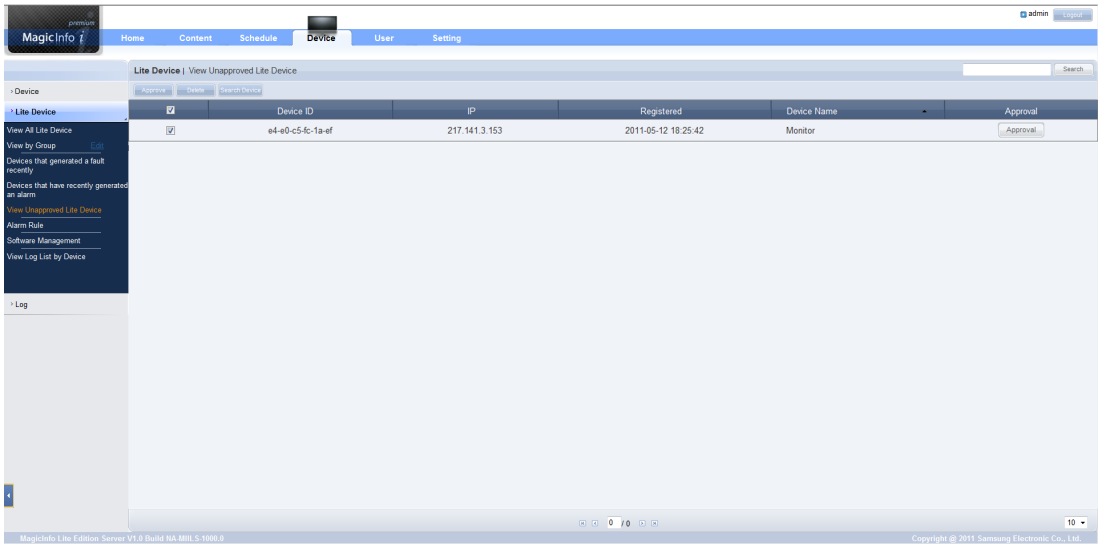
3 Select **Device** from the top menu bar.



4 Select **Lite Device** from the menus on the left.



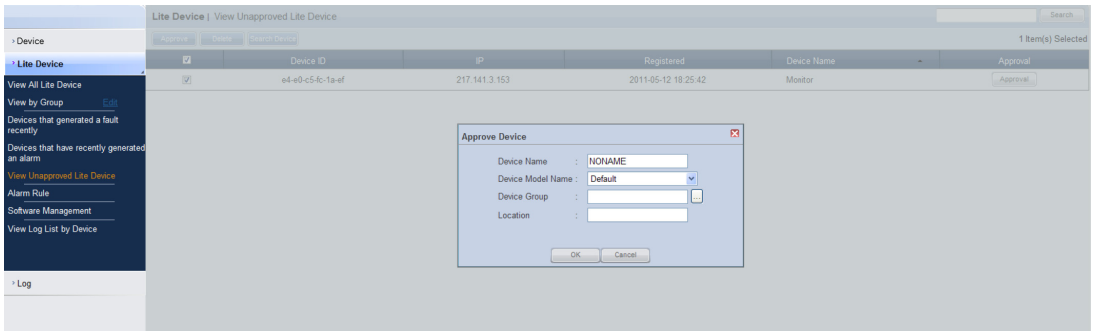
5 Select **View Unapproved Lite Device** from the sub-menus of **Lite Device**.



6 Select the **Approve** button for your device from the list of unapproved Lite devices.

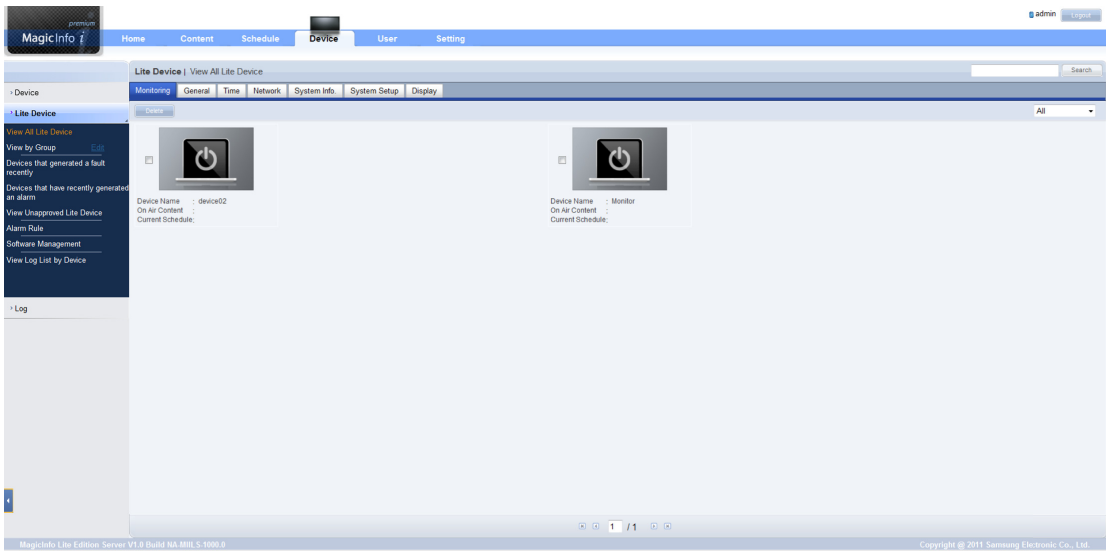
Pressing the **INFO** button on the remote when a network schedule is running will display the details of the schedule. Check that the correct device has been selected by viewing the device ID in the details.

7 Enter the information required to approve the device.



- **Device Name**: Enter the device name.
- **Device Model Name**: Select your device model.
- **Device Group**: Select ... to specify the group.
- **Location**: Enter the current location of the device.

8 Select the **View All Lite Device** menu to check that the device has been registered.



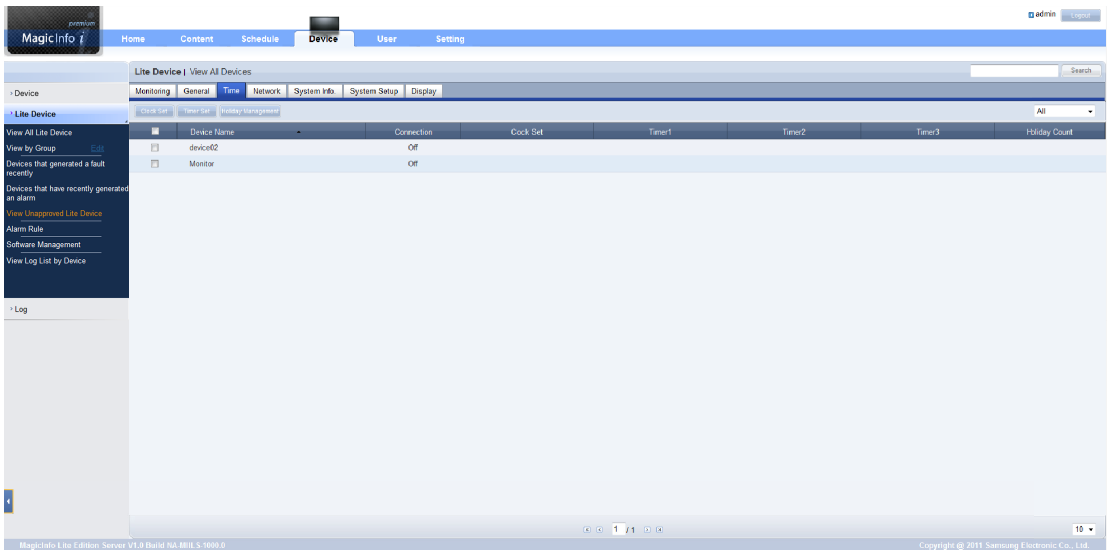
9 When the device is approved by the server, the schedule registered in the selected group will be downloaded to the device. The schedule will run after it is downloaded.

- For further details on how to configure a schedule, refer to the <MagicInfo server user's manual>.
- If a device is deleted from the list of devices approved by the server, the device will reboot to reset its settings.

10.2.4 Setting the current time

A schedule may not run if the time set on the device is different from the server's current time.

1 Go to the tabs **Device** → **Time**.



2 Select your device.

3 Select **Clock Set**, and sync the time with the server.

For further details on how to manage the time (scheduling, holiday management, etc.), refer to the <MagicInfo server user's manual>.

10.3 Local Schedule

Run a schedule created by **Local Schedule Manager**.

Go to **Local Schedule Manager** → Select the content you want to run

This menu is disabled if no schedule was created by **Local Schedule Manager**.

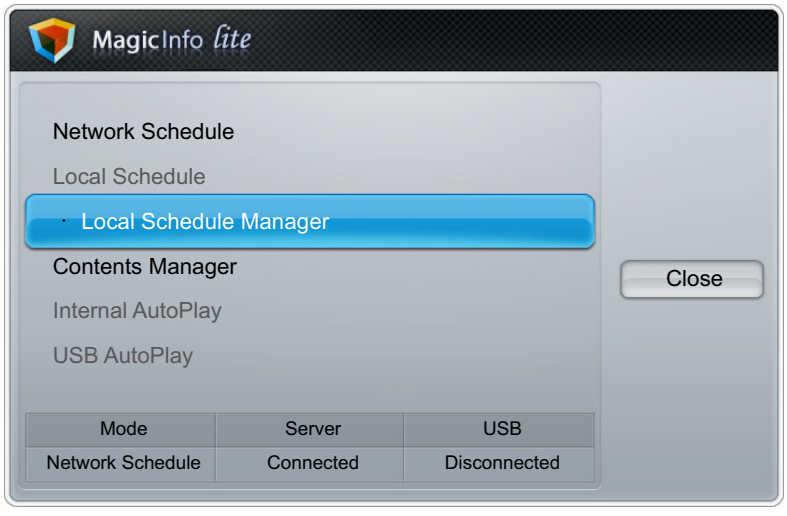
1. Select **Local Schedule Manager** in the **MagicInfo Lite** menu screen.
2. Run a schedule created by local schedule.

10.4 Local Schedule Manager

Configure the settings for playback from **Local Schedule**. Alternatively, select and play content from internal or USB memory according to the customized playback sequence.

10.4.1 Registering a Local Schedule

1. Select **Local Schedule Manager** in the **MagicInfo Lite** menu screen.

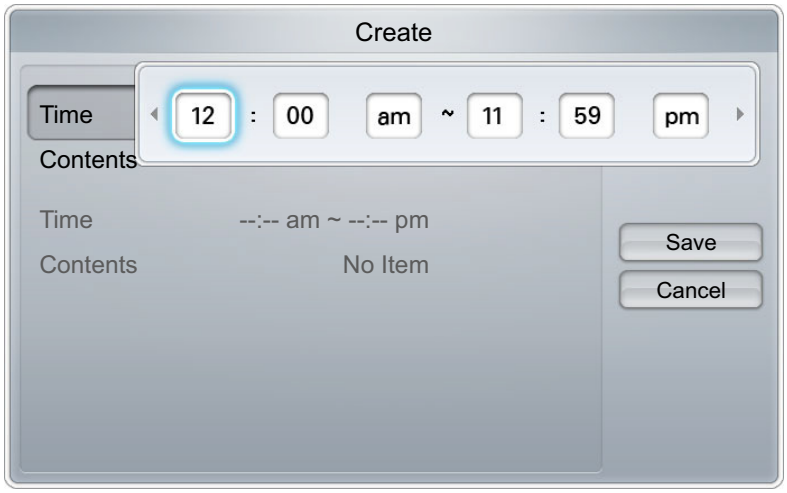


2 Select **Create** in the **Local Schedule Manager** screen.

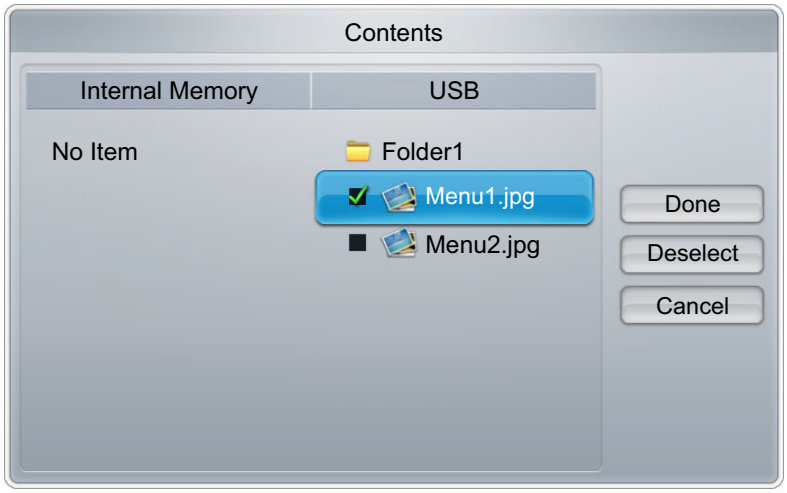
3 Select **Time** to set the time you want to play content.

To create a schedule that starts on one day and finishes the next day, the time must be set as shown below.

- E.g.) PM 09:00 - AM 12:00 / AM 12:00 - AM 06:00

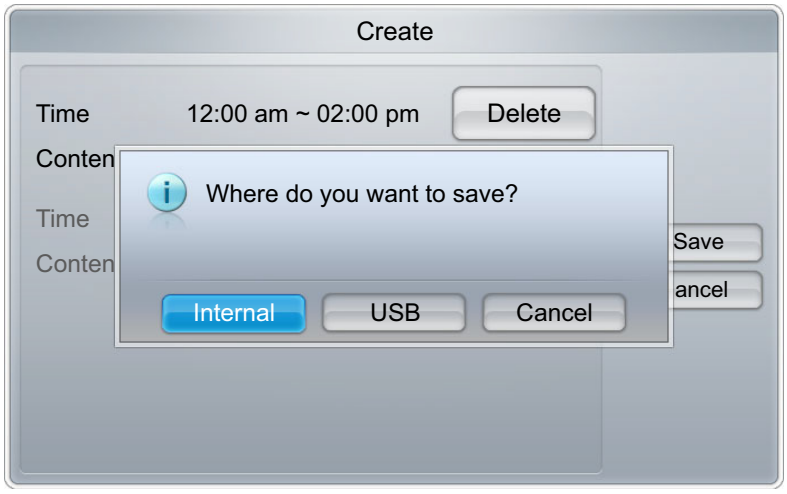


4 Select **Contents** to specify the content you want to play.

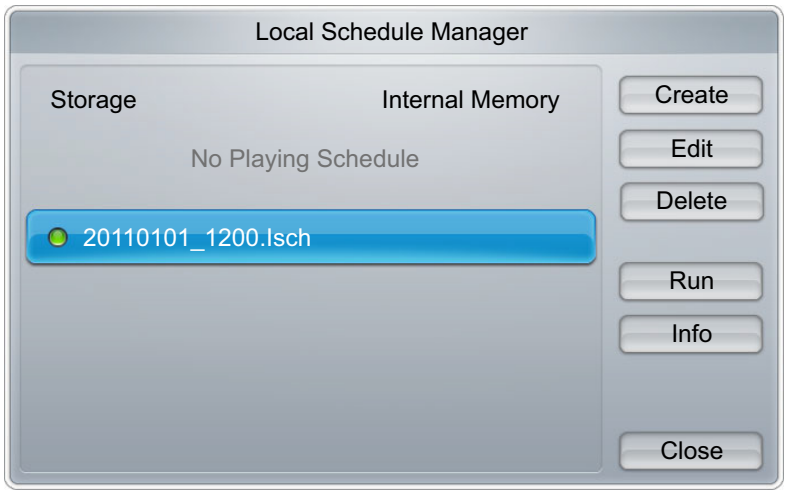


5 Select **Save**.

6 Select the memory space you want to save the content to.



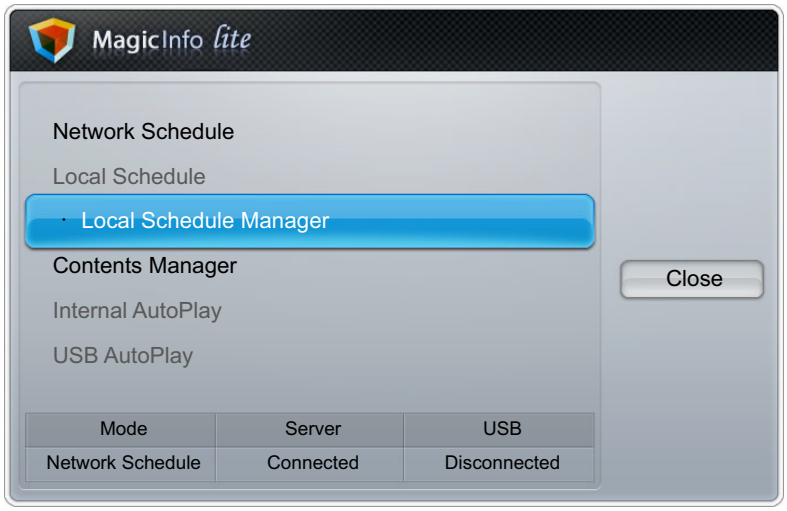
7 Check that the schedule has been added to the **Local Schedule Manager**.



10.4.2 Modifying a Local Schedule

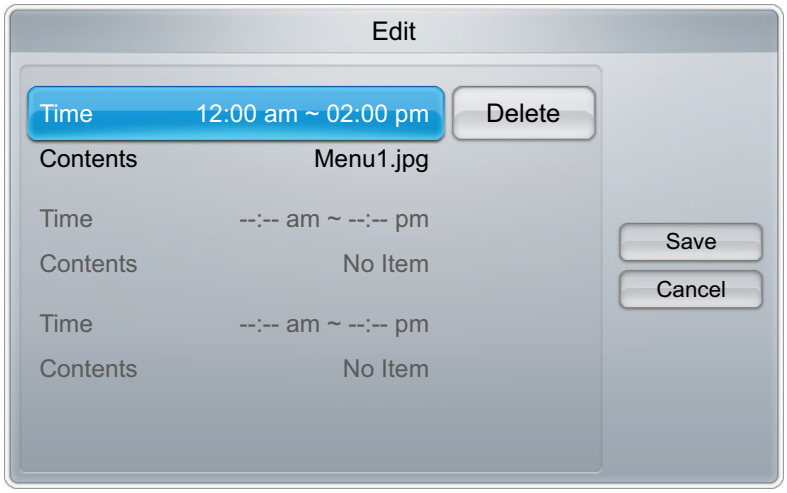
Ensure at least one **Local Schedule** is registered.

1 Select **Local Schedule Manager** in the **MagicInfo Lite** menu screen.



2 Select the local schedule you want to modify.

3 Select **Edit**.

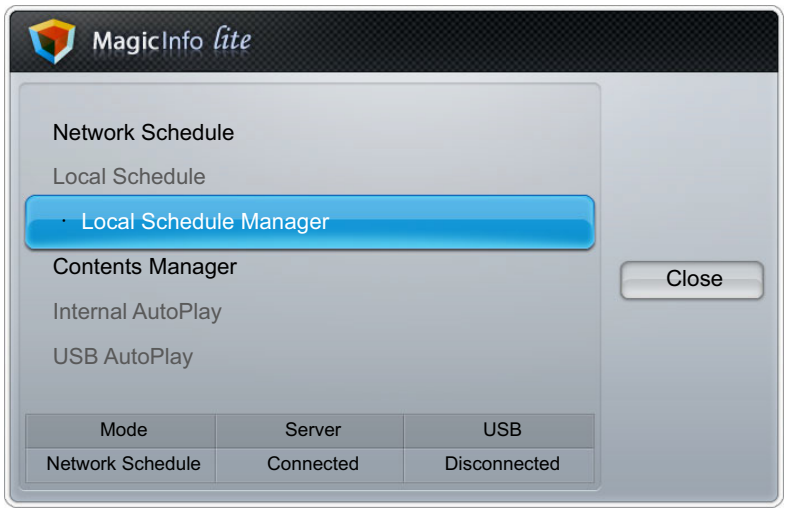


4 Change the details of the local schedule. Next, select **Save**.

10.4.3 Deleting a Local Schedule

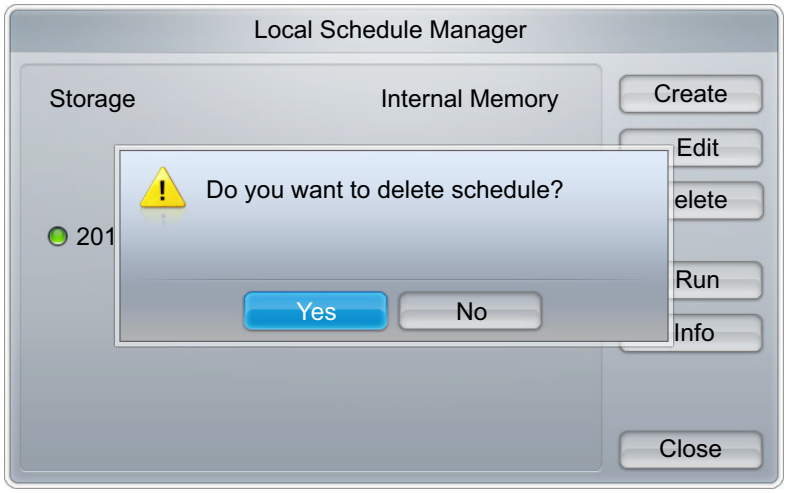
Ensure at least one **Local Schedule** is registered.

1 Select **Local Schedule Manager** in the **MagicInfo Lite** menu screen.



2 Select the local schedule you want to delete.

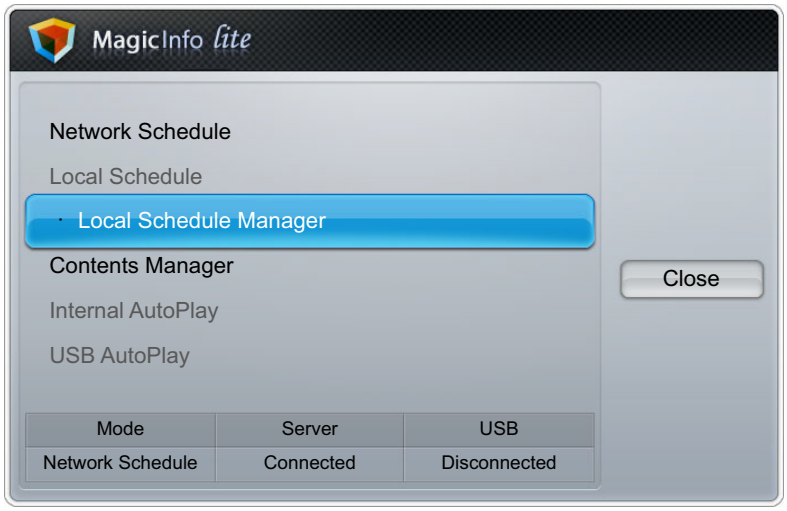
3 Select **Delete**.



10.4.4 Running a Local Schedule

Ensure at least one **Local Schedule** is registered.

1 Select **Local Schedule Manager** in the **MagicInfo Lite** menu screen.

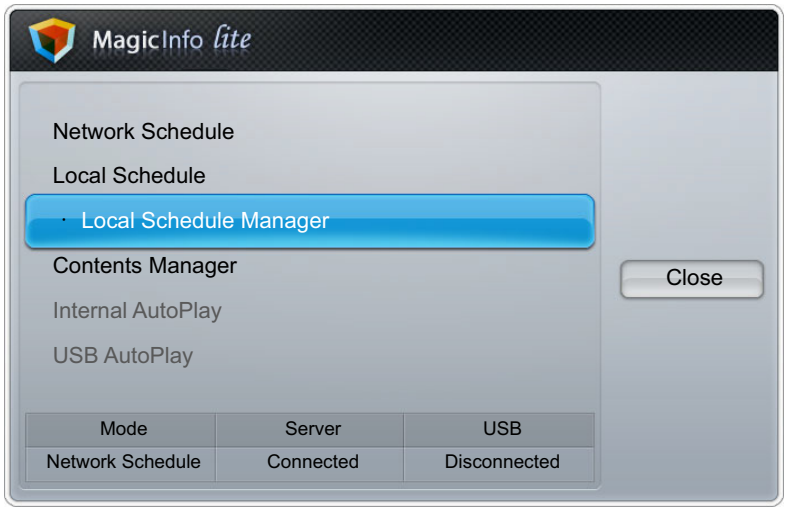


2 Select the local schedule you want to run. Next, select **Run**.

10.4.5 Stopping a Local Schedule

This function is enabled only when a schedule is running. Selecting **Stop** will change the running mode from **Local schedule** to **Network schedule**.

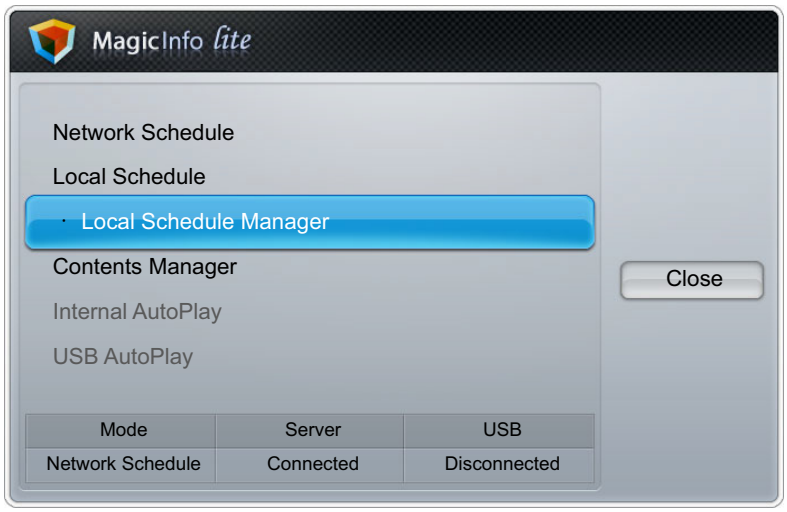
1 Select **Local Schedule Manager** in the **MagicInfo Lite** menu screen.



2 Select **Stop**.

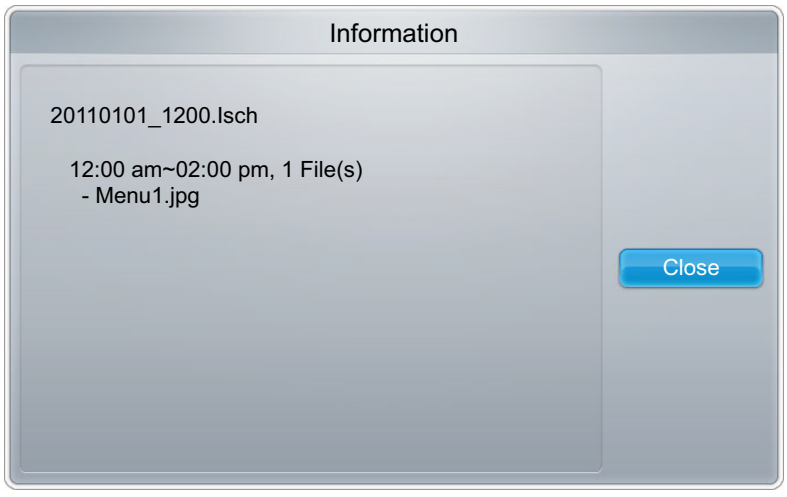
10.4.6 Viewing the details of a Local Schedule

1 Select **Local Schedule Manager** in the **MagicInfo Lite** menu screen.



2 Select the local schedule you want to view the details of.

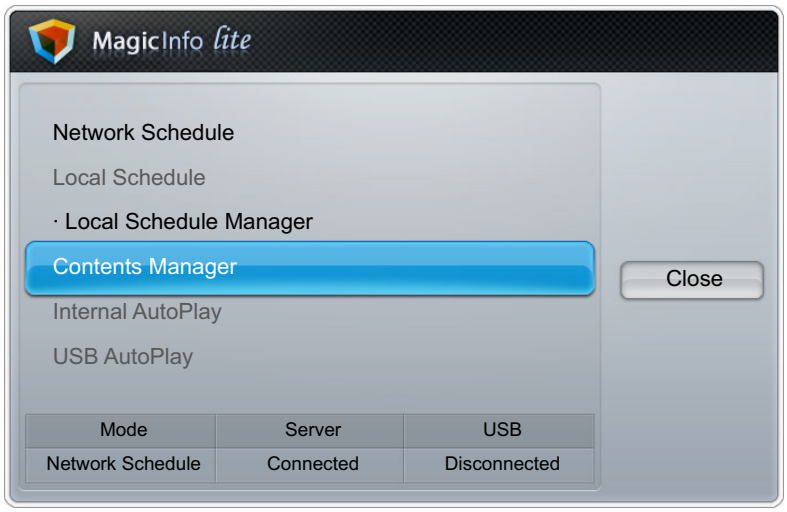
3 The details of the schedule will be displayed.



10.5 Contents Manager

10.5.1 Copying content

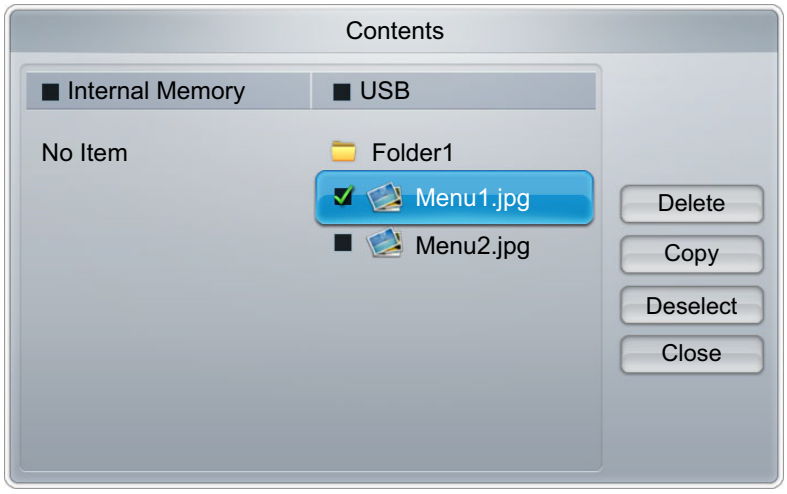
1 Select **Contents Manager** in the **MagicInfo Lite** menu screen.



2 Select the content you want to copy.

- If content under **Internal Memory** is selected: You can copy the content under **Internal Memory** to **USB** memory.
- If content under **USB** is selected: You can copy the content under **USB** memory to **Internal Memory**.

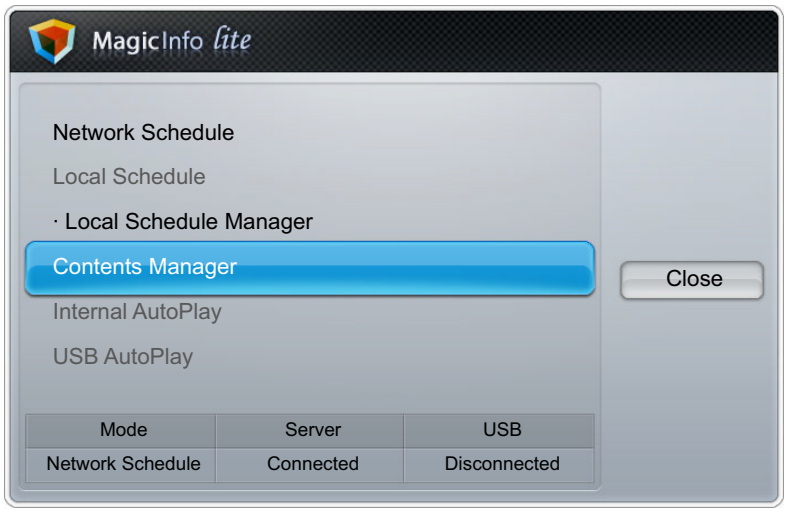
Selecting content under **Internal Memory** and **USB** memory at the same time will disable copying.



3 Select **Copy**.

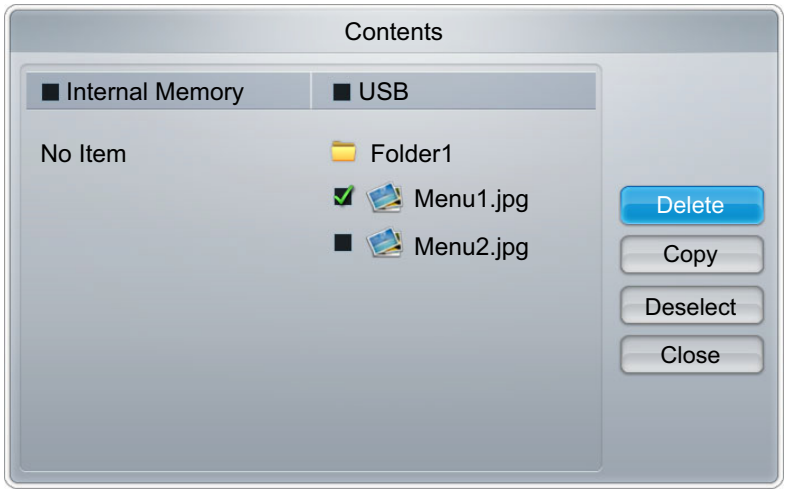
10.5.2 Deleting content

1 Select **Contents Manager** in the **MagicInfo Lite** menu screen.

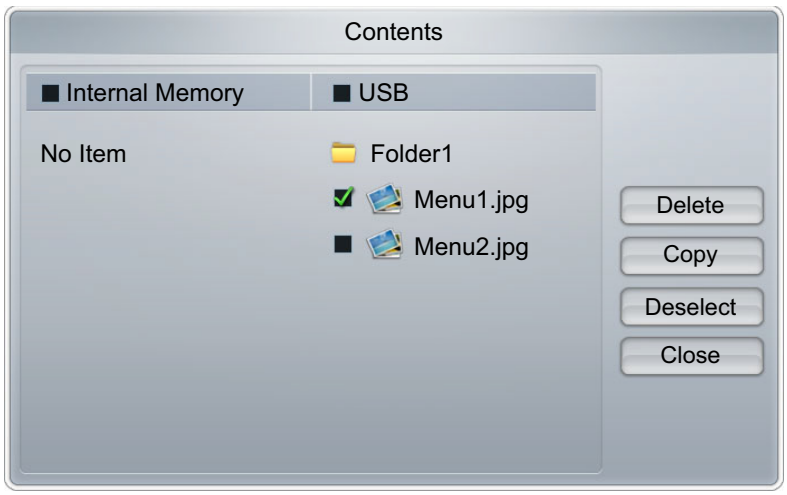


2 Select the content you want to delete.

- Content under **Internal Memory** and **USB** memory can be deleted at the same time.



3 Select **Delete**.



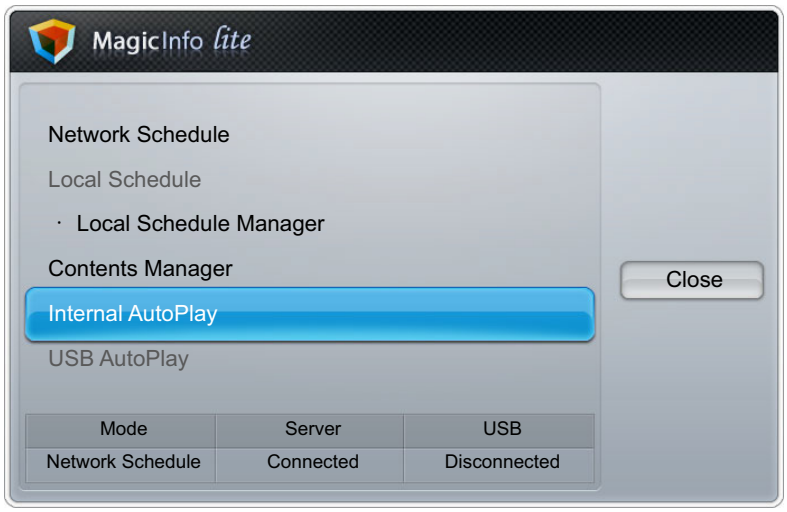
10.6 Internal AutoPlay

10.6.1 Running Internal AutoPlay

Ensure at least one content item exists under **Internal Memory**.

1 Select **Internal AutoPlay** in the **MagicInfo Lite** menu screen.

- Play content, which has been copied to **Internal Memory**, in alphabetical order.



10.7 USB AutoPlay

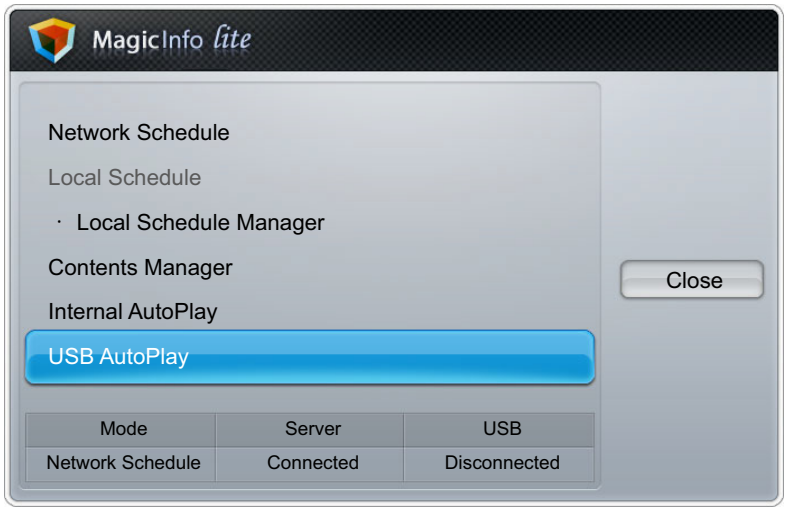
10.7.1 Running Internal AutoPlay

Ensure a USB device is inserted. Be sure to create a folder named "MagicInfoSlide" in the USB device and put content in the folder.

1 Select **USB AutoPlay** in the **MagicInfo Lite** menu screen.

- The content contained in the MagicInfoSlide folder on the USB device will play in alphabetical order.

- **USB AutoPlay** will automatically run if USB memory is connected when **Network Schedule** or **Local Schedule** is running.



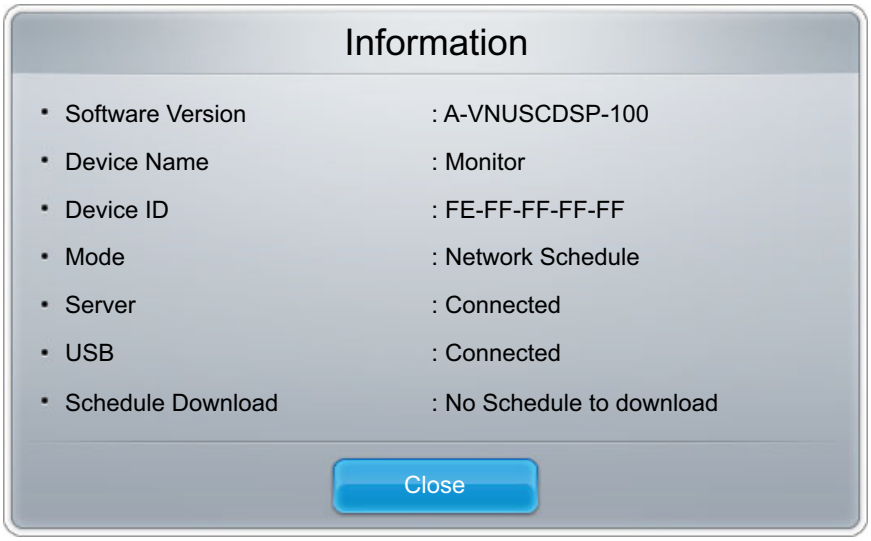
10.8 When Content is Running

10.8.1 Viewing the details of the content that is running

Press the **INFO** button on the remote control.

1. **Software Version**: Displays the software version of a device.
2. **Device Name**: Displays the name of a device recognized by the server.
3. **Device ID**: Displays the original identification number of a device.
4. **Mode**: Displays the current operating mode (**Network Schedule**, **Local Schedule**, **Internal AutoPlay** or **USB AutoPlay**) of **MagicInfo Lite Player**.
5. **Server**: Displays the connection status (**Connected**, **Disconnected** or **Non-approval**) of the server.
6. **USB**: Displays the connection status of a USB device.

7 **Schedule Download**: Displays the progress of a network schedule being downloaded from the server.



10.8.2 Changing the settings for the content that is running

Press the **TOOLS** button on the remote control.

You can change the **Picture Mode** or **Sound Mode** setting or safely remove a USB device (**Safely Remove USB**) while content is playing by pressing the **TOOLS** button on the remote control.

- **Picture Mode**: Customizes the screen settings for the content currently playing (**Dynamic**, **Standard**, **Natural**, **Movie**).
- **Sound Mode**: Customizes the audio settings for the content currently playing (**Standard**, **Music**, **Movie**, **Clear Voice**, **Amplify**).
- **Safely Remove USB**

11 Troubleshooting Guide

11.1 Requirements Before Contacting Samsung Customer Service Center

11.1.1 Testing the Product

Before calling Samsung Customer Service Center, test your product as follows. If the problem persists, contact Samsung Customer Service Center.

Check if your product is operating normally by using the product test function.

If the screen remains blank while the power LED blinks even when the product is correctly connected to a PC, perform product testing.

1. Power off both the PC and product.
2. Disconnect all the cables from the product.
3. Power on the product.
4. If "**No Signal**" is displayed, the product is operating normally.

   If the screen remains blank, check the PC system, video controller and cable.

11.1.2 Checking the Resolution and Frequency

"**Not Optimum Mode**" will briefly be displayed if a mode that exceeds a supported resolution is selected (refer to Supported Resolutions).

11.1.3 Check the followings.

Installation issue (PC mode)	
The screen keeps switching on and off.	Check the cable connection between the product and PC, and ensure the connection is secure. ("2.2 Connecting and Using a PC")
Blank spaces are found on all four sides of the screen when an HDMI or HDMI-DVI cable is connected to the product and PC.	The blank spaces found on the screen have nothing to do with the product. Blank spaces on the screen are caused by the PC or graphics card. To resolve the problem, adjust the screen size in the HDMI or DVI settings for the graphics card. If the graphics card settings menu does not have an option to adjust the screen size, update the graphics card driver to the latest version. (Please contact the graphics card or computer manufacturer for further details about how to adjust the screen settings.)

Screen issue	
The power LED is off. The screen will not switch on.	Make sure that the power cord is connected. ("2.2 Connecting and Using a PC")
"**No Signal**" is displayed on the screen	Check that the product is connected correctly with a cable ("2.2 Connecting and Using a PC")
	Check that the device connected to the product is powered on.
"**Not Optimum Mode**" is displayed.	This message is displayed when a signal from the graphics card exceeds the product's maximum resolution and frequency.
	Refer to the Standard Signal Mode Table and set the maximum resolution and frequency according to the product specifications.
The images on the screen look distorted.	Check the cable connection to the product ("2.2 Connecting and Using a PC")

Screen issue	
The screen is not clear. The screen is blurry.	Adjust **Coarse** and **Fine**.
	Remove any accessories (video extension cable, etc) and try again.
	Set the resolution and frequency to the recommended level.
The screen appears unstable and shaky.	Check that the resolution and frequency of the PC and graphics card are set within a range compatible with the product. Then, change the screen settings if required by referring to the Additional Information on the product menu and the Standard Signal Mode Table.
There are shadows or ghost images left on the screen.	
The screen is too bright. The screen is too dark.	Adjust **Brightness** and **Contrast**.
Screen color is inconsistent.	Go to **Picture** and adjust the **Color Temp.** settings.
The colors on the screen have a shadow and are distorted.	Go to **Picture** and adjust the **Color Temp.** settings.
White does not really look white.	Go to **Picture** and adjust the **Color Temp.** settings.
There is no image on the screen and the power LED blinks every 0.5 to 1 second.	The product is in power-saving mode.
	Press any key on the keyboard or move the mouse to return to the previous screen.

Sound issue	
There is no sound.	Check the connection of the audio cable or adjust the volume (" Connecting and Using a Source Device")
	Check the volume.
The volume is too low.	Adjust the volume.
	If the volume is still low after turning it up to the maximum level, adjust the volume on your PC sound card or software program.

Remote control issue	
The remote control does not work.	Make sure that the batteries are correctly in place (+/-).
	Check if the batteries are flat.
	Check for power failure.
	Make sure that the power cord is connected.
	Check for any special lighting or neon signs switched on in the vicinity.

Source device issue	
A beeping sound is heard when my PC is booting.	If a beeping sound is heard when your PC is booting, have your PC serviced.

11.2 Q & A

Question	Answer
How can I change the frequency?	Set the frequency on your graphics card. • "Windows XP": Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**. • "Windows ME/2000": Go to **Control Panel** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**. • "Windows Vista": Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**. • "Windows 7": Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.

Question	Answer
How can I change the resolution?	• "Windows XP": Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** and adjust the resolution. • "Windows ME/2000": Go to **Control Panel** → **Display** → **Settings** and adjust the resolution. • "Windows Vista": Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** and adjust the resolution. • "Windows 7": Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
How do I set power-saving mode?	• Windows XP: Set power-saving mode in **Control Panel** → **Appearance and Themes** → **Display** → **Screen Saver Settings** or BIOS SETUP on the PC. • Windows ME/2000: Set power-saving mode in **Control Panel** → **Display** → **Screen Saver Settings** or BIOS SETUP on the PC. • Windows Vista: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC. • Windows 7: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC.

Refer to the user manual for your PC or graphics card for further instructions on adjustment.

12.1 General

Model Name		MD32B	MD40B
Panel	Size	32 inches (80cm)	40 inches (101cm)
	Display area	698.4 mm (H) x 392.85 mm (V) 27.5 inches (H) x 15.5 inches (V)	885.6 mm (H) x 498.15 mm (V) 34.9 inches (H) x 19.6 inches (V)
Dimensions (W x H x D) / Weight		736.0 x 434.5 x 93.5 mm / 6.4 Kg 29.0 x 17.1 x 3.7 inches / 14.1 lbs	925.4 x 541.0 x 93.5 mm / 9.6 Kg 36.4 x 21.3 x 3.7 inches / 21.2 lbs
VESA Mounting Interface		200 mm x 200 mm / 7.9 inches x 7.9 inches	

Model Name		MD46B	MD55B
Panel	Size	46 inches (116cm)	55 inches (138cm)
	Display area	1018.08 mm (H) x 572.67 mm (V) 40.1 inches (H) x 22.5 inches (V)	1209.6 mm (H) x 680.4 mm (V) 47.6 inches (H) x 26.8 inches (V)
Dimensions (W x H x D) / Weight		1057.7 x 615.8 x 94.9 mm / 12.2 Kg 41.6 x 24.2 x 3.7 inches / 26.9 lbs	1247.7 x 722.9 x 95.2 mm / 17.9 Kg 49.1 x 28.5 x 3.7 inches / 39.5 lbs
VESA Mounting Interface		400 mm x 400 mm / 15.7 inches x 15.7 inches	

Model Name		MD32B / MD40B / MD46B/ MD55B
Synchronization	Horizontal	30 ~ 81 kHz
	Vertical	56 ~ 75 Hz
Display Color		1.07B
Resolution	Optimum resolution	1920 x 1080 @ 60Hz
	Maximum resolution	1920 x 1080 @ 60Hz
Maximum Pixel Clock		148.5MHz (Analog, Digital)
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.
Audio output		10 W + 10 W
Signal connectors		Input : RGB IN(PC D-Sub), DVI IN, HDMI IN, RGB/DVI/HDMI/AUDIO IN, RJ45, RS232C IN Output : AUDIO OUT, RS232C OUT
USB		1 DOWN(2.0)

Model Name		MD32B / MD40B / MD46B/ MD55B
Environmental considerations	Operating	Temperature: 32˚F ~ 104˚F (0˚C ~ 40˚C) Humidity : 10 % ~ 80%, non-condensing
	Storage	Temperature: -4˚F ~ 140˚F (-20˚C ~ 60˚C) Humidity : 5% ~95 %, non-condensing

Plug-and-Play : This monitor can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the monitor and PC system optimizes the monitor settings. Monitor installation takes place automatically. However, you can customize the installation settings if desired.

Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may appear brighter or darker on the panel. This does not affect product performance.

This device is a Class A digital apparatus.

12.2 PowerSaver

The power-saving function of this product reduces power consumption by switching off the screen and changing the color of the power LED if the product is not used for a specified period of time. The power is not turned off in power-saving mode. To switch the screen back on, press any key on the keyboard or move the mouse. Power-savign mode only functions when the product is connected to a PC with a power-saving function.

State		Normal Operation		Power saving mode	Power off (Power Button off)
		Rating	Typical		
Power Indicator		On		Blinking	Off
Power Consumption (Without Network Box)	MD32B	85 W	50 W	Less than 1 W	Less than 1 W
	MD40B	108 W	87 W		
	MD46B	124 W	94 W		
	MD55B	149 W	124 W		

- The displayed power consumption level can vary in different operating conditions or when settings are changed.
- SOG(Sync On Green) is not supported.
- To reduce the power consumption to 0, turn off the switch at the back or disconnect the power cord. Disconnect the power cable if you will not be using the product for an extended period of time (during vacation, etc.).

12.3 Preset Timing Modes

- This product can be set to only one resolution for each screen size to obtain the optimum picture quality due to the nature of the panel. Using a resolution other than the specified resolution may degrade the picture quality. To avoid this, it is recommended that you select the optimum resolution specified for your product.
- Check the frequency when you exchange a CDT product (connected to a PC) for an LCD product. If the LCD product does not support 85Hz, change the vertical frequency to 60Hz using the CDT product before you exchange it with the LCD product.

The screen will automatically be adjusted if a signal that belongs to the following standard signal modes is transmitted from your PC. If the signal transmitted from the PC does not belong to the standard signal modes, the screen may be blank with the power LED on. In such a case, change the settings according to the following table by referring to the graphics card user manual.

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 800	49.702	59.810	83.500	-/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 1366 x 768	47.712	59.790	85.500	+/+
VESA, 1440 x 900	55.935	59.887	106.500	-/+
VESA,1600 x 900(RB)	60.000	60.000	108.000	+/+
VESA, 1680 x 1050	65.290	59.954	146.250	-/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+

Horizontal Frequency

The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

Vertical Frequency

The product displays a single image multiple times per second (like a fluorescent light) to display what the viewer sees. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

12.4 License

TheaterSound HD, and symbol are trademarks of SRS Labs, Inc. TheaterSound HD technology is incorporated under license form SRS Lab, Inc.

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol aretrademarks of Dolby Laboratories.

Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,487,535 & other U.S. and worldwide patents issued & pending. DTS and the Symbol are registered trademarks. & DTS 2.0+ Digital Out and the DTS logos are trademarks of DTS, Inc. Product Includes software. © DTS, Inc. All Rights Reserved.

DivX Certified® to play DivX® video up to HD 1080p, including premium content.

DivX®, DivX Certified® and associated logos are trademarks of DivX, Inc. and are used under license.

ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified® device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to vod.divx.com for more information on how to complete your registration.

Covered by one or more of the following U.S. patents : 7,295,673; 7,460,668; 7,515,710; 7,519,274

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

Open Source Licence Notice

In the case of using open source software, Open Source Licences are available on the product menu.

Open Source Licence Notice is written only English.

Contact SAMSUNG WORLDWIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

LATIN AMERICA		
ARGENTINA	0800-333-3733	http://www.samsung.com
BRAZIL	0800-124-421 4004-0000	http://www.samsung.com
BOLIVIA	800-10-7260	http://www.samsung.com
CHILE	800-SAMSUNG (726-7864) From mobile 02-482 82 00	http://www.samsung.com
COLOMBIA	01-8000112112	http://www.samsung.com
COSTA RICA	0-800-507-7267	http://www.samsung.com
DOMINICA	1-800-751-2676	http://www.samsung.com
ECUADOR	1-800-10-7267	http://www.samsung.com
EL SALVADOR	800-6225	http://www.samsung.com
GUATEMALA	1-800-299-0013	http://www.samsung.com
HONDURAS	800-27919267	http://www.samsung.com
JAMAICA	1-800-234-7267	http://www.samsung.com
NICARAGUA	00-1800-5077267	http://www.samsung.com
PANAMA	800-7267	http://www.samsung.com
PERU	0-800-777-08	http://www.samsung.com
PUERTO RICO	1-800-682-3180	http://www.samsung.com
TRINIDAD & TOBAGO	1-800-SAMSUNG (726-7864)	http://www.samsung.com
VENEZUELA	0-800-100-5303	http://www.samsung.com

Responsibility for the Pay Service (Cost to Customers)

When the service is requested, in spite of in warranty, we may charge you for a visit from a service technician in the following cases.

Not a product defect

Cleaning of the product, Adjustment, Explanation, Re-installation and etc.

- If a service technician gives instructions on how to use product or simply adjusts options without disassembling product.
- If a defect is caused by external environmental factors (Internet, Antenna, Wired Signal, etc.).
- If a product is reinstalled or devices are connected additionally after installing the purchased product for the first time.
- If a product is reinstalled to move to a different spot or to move to a different house.
- If customer requests instructions on how to use because of another company's product.
- If customer requests instructions on how to use the network or another company's program.
- If customer requests software installation and setup for the product.
- If a service technician removes/cleans dusts or foreign materials inside of the product.
- If customer requests an installation additionally after purchasing a product through home-shopping or online.

A Product damage caused by customer's fault

Product damage caused by customer's mishandling or wrong repair.

If a product damage is caused by;

- external impact or drop.
- use of supplies or separately sold product unspecified by Samsung.
- repair from a person besides an engineer of outsourcing service company or partner of Samsung Electronics Co., Ltd.
- remodeling or repairing the product by customer.
- using it with incorrect voltage or non-authorised electrical connections.
- not following the "cautions" in User Manual.

Others

- If product fails by natural disaster (lightning, fire, earthquake, flood damage, etc).
- If consumable components are all used up (Battery, Toner, Fluorescent lights, Head, Vibrator, Lamp, Filter, Ribbon, etc.).

If customer requests a service in case the product has no defect, service fee may be charged.
So please read User Manual first.

Optimum Picture Quality and Afterimage Burn-in Prevention

Optimum Picture Quality

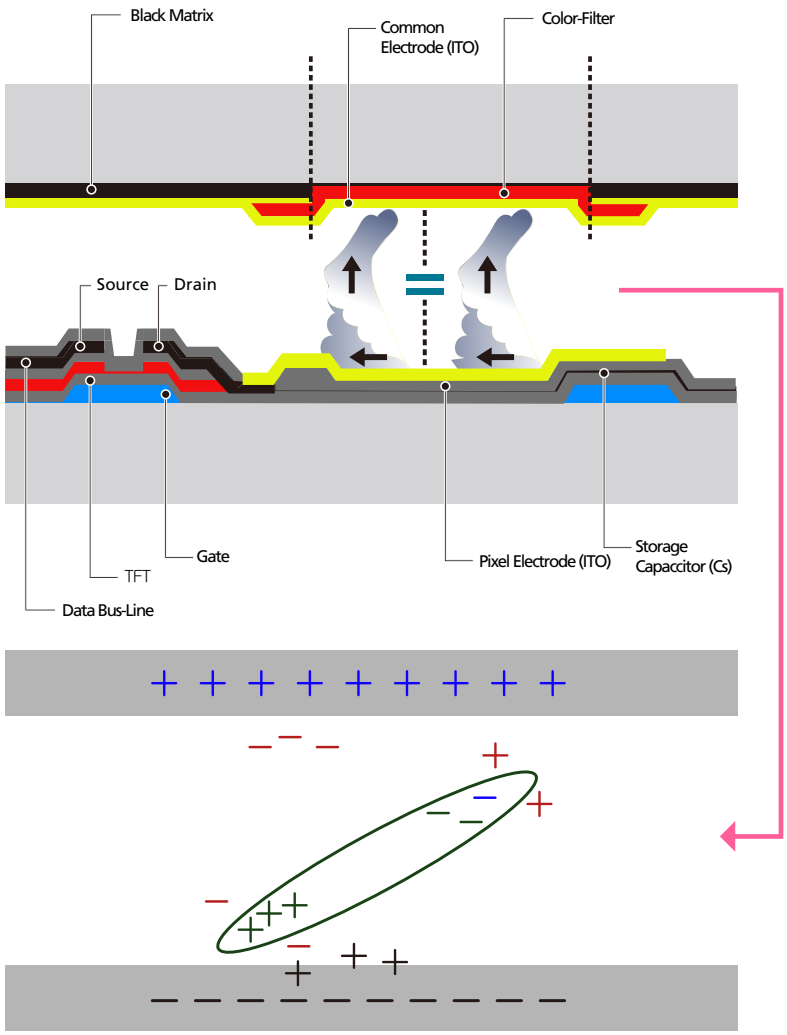
- To enjoy the optimum picture quality, go to Control Panel on your PC and adjust the resolution and refresh rate as follows. The picture quality of TFT-LCDs may degrade if the optimum resolution is not selected.
  - Resolution: 1920 X 1080
  - Vertical frequency (refresh rate): 60Hz
- Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may be brighter or darker on the panel. This does not affect product performance.
  - The number of sub-pixels by panel type: MD32B, MD40B, MD46B, MD55B : 6,220,800
- Run "**Auto Adjustment**" to improve the picture quality. If noise is still found even after auto adjustment, adjust **Coarse** or **Fine**.
- Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.
  - Activate power-saving mode or a dynamic screen saver if you will not be using the product for an extended period of time.
- Unlike CDT monitors, TFT-LCD monitors (due to the nature of the panel) can be set to only one resolution to obtain the optimum picture quality. Therefore, setting a resolution other than the specified resolution may degrade the picture quality. To avoid this, it is recommended that you select the optimum resolution specified for your monitor.

Prevention of Afterimage Burn-in

What is afterimage burn-in?

Afterimage burn-in should not occur when the LCD panel is operating normally. Normal operation refers to a continuously changing video pattern. If the LCD panel displays a fixed pattern for an extended period of time (more than 12 hours), a slight voltage difference may occur between the electrodes in pixels that control the liquid crystals.

Such a voltage difference between electrodes increases with time and makes the liquid crystals thinner. When this occurs, a previous image can remain on the screen when the pattern changes. To prevent this, the accumulated voltage difference should be reduced.



- Powering Off, Screen Saver and Power Saving Mode
  - Power off the product for 2 hours after using it for 12 hours.
  - Go to Display Properties > Power Supply on your PC and set the product to power off as required.
  - Using a screen saver is recommended.

    It is best to use a single-color or moving-image screen saver.

- Regular Color Change

Type 1

FLIGHT	TIME
OZ348	20:30
UA102	21:10

Type 2

FLIGHT	TIME
OZ348	20:30
UA102	21:10

Use 2 colors

Switch between 2 colors every 30 minutes as shown above.

- Avoid combinations of a text color and background color of contrasting brightness.

  Avoid using grey as it may contribute to afterimage burn-in.

  Avoid using colors of contrasting brightness (black and white; grey).

FLIGHT : TIME
OZ348 : 20:30

FLIGHT : TIME
OZ348 : 20:30

- Regular Text Color Change
  - Use bright colors of similar brightness.

    Interval: Change text color and background color every 30 minutes

FLIGHT : TIME
OZ348 : 20:30

FLIGHT : TIME
OZ348 : 20:30

FLIGHT : TIME
OZ348 : 20:30

FLIGHT : TIME
OZ348 : 20:30

  - Move and change text every 30 minutes as shown below.

[Step 1] [Step 2] [Step 3]

  - Regularly display a moving image along with a logo.

    Interval: Display a moving image along with a logo for 60 seconds after using for 4 hours.
  - The best way to protect the product from afterimage burn-in is switching the power off or setting the PC or system to run a screen saver when not in use. Also, Warranty service may be limited depending on instruction guide.

Terminology

Dot Pitch

The monitor and screen consist of red, green and blue dots. A shorter distance between the dots produces a higher resolution. Dot pitch refers to the distance between the shortest distance between dots of the same color. Dot pitch is measured in millimeters.

Vertical Frequency

The monitor displays a single image many times per second (like a fluorescent light that flickers) to display an image for a viewer to see. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

E.g. 60Hz refers to a single image being displayed 60 times in one second.

Horizontal Frequency

The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

Plug & Play

Plug & Play is a function that allows the automatic exchange of information between a monitor and PC to produce an optimum display environment. The product uses VESA DDC (international standard) to execute Plug & Play.

Resolution

Resolution is the number of horizontal dots (pixels) and vertical dots (pixels) that form a screen. It represents the level of display detail. A higher resolution enables more data to be displayed on the screen and is useful to perform multiple tasks simultaneously.

E.g. A resolution of 1920 X 1080 consists of 1,920 horizontal pixels (horizontal resolution) and 1,080 vertical pixels (vertical resolution).

Multiple Display Control (MDC)

MDC (Multiple Display Control) is an application that allows multiple display devices to be controlled simultaneously using a PC. Communication between a PC and monitor takes place using RS232C (serial data transmission) and RJ45 (LAN) cables.

DVD(Digital Versatile Disc)

DVD refers to a CD-sized mass storage disk where you can save multimedia (audio, video or game) applications using MPEG-2 video compression technology.

HDMI(High Definition Multimedia Interface)

It is an interface that can be connected to a digital audio source as well as a high-definition video source by using a single cable without compression.

Stereo

Stereo refers to a technology that outputs audio signals via two channels. It delivers 3D sound experience through separate left and right audio channels over two speakers.

Source

Input source refers to a video source device connected to the product such as a camcorder or video or DVD player.

480i / 480p / 720p / 1080i / 1080p

Each of the scanning rates above refers to the number of effective scanning lines that decides the screen resolution. The scanning rate may be indicated in i (interlaced) or p (progressive), depending on the scanning method.

- Scanning

Scanning refers to a process of sending pixels that form an image progressively. A larger number of pixels will deliver a clearer and more vivid picture.

- Progressive

In progressive scan mode, all lines of pixels are scanned one by one (progressively) on the screen.

- Interlaced

In interlaced scan mode, every other line of pixels is scanned from top to bottom first and then the remaining lines of pixels (that were not scanned) are scanned.

Index

A

Appendix 188

B

Batteries 28

C

Changing the Resolution 55

Contact SAMSUNG WORLDWIDE 188

Custom settings screen 99

E

Eco Solution 107

Energy Saving 135

I

Items sold separately 22

M

MagicInfo Lite 110

MDC InstallationUninstallation 65

Menu Language 134

Mode 98

Multi Control 131

N

Network Settings 121

O

OSD Rotation 149

P

PC connection 53

Picture Size 100

Port 25

Problem report 177

R

Remote Control 27

Reset All 150

Responsibility for the Pay Service (Cost to Customers) 189

S

Screen Adjustment 99

Screen Position 141

Sleep Timer 132

Software Upgrade 151

Source AutoSwitch Settings 142

Specifications 183

Standard 98

T

Time 132

V

Video connection 57